REDUCING PREJUDICE VIA DIRECT INTERGROUP CONTACT: AN EXPERIMENTAL STUDY OF THE SECONDARY TRANSFER EFFECT

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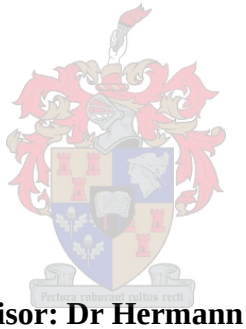
Thesis presented in fulfilment of the requirements for the degree of Master of Arts (Psychology) at Stellenbosch University



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ABSTRACT

The contact hypothesis (Allport, 1954) states that positive intergroup contact decreases bias. Allport's (1954) formulation of the contact hypothesis has proved highly influential and experimental research that confirmed its basic principles (Pettigrew & Tropp, 2006, 2008). The contact hypothesis has since developed into a theory with important implications (Hewstone, 2009; Hewstone & Swart, 2011). Contact Theory (Allport, 1954; Pettigrew, 1998; Tausch & Hewstone, 2010) is one of the most extensively investigated frameworks for reducing intergroup prejudice and a meta-analysis of 515 of studies has established that there is a significant negative relationship between contact and prejudice (Pettigrew & Tropp, 2006). The prejudice-reducing benefits of intergroup contact have also been shown to generalise well beyond the original contact situation or the specific outgroup encountered (Pettigrew & Tropp, 2006). There is also evidence that contact effects generalise from encounters with one outgroup to attitudes toward other outgroups outside that contact situation (i.e., a "secondary transfer effect"; Pettigrew, 2009). The present research investigated the secondary transfer effect (STE) of contact among a sample of white female South African students studying at Stellenbosch University. The results show that participants (N = 25) who engaged with a female black (African) South African confederate in a closeness induction task experienced a significant increase in outgroup trust towards black (African) South Africans in general post-task relative to their scores of outgroup trust one week earlier (Time 1 baseline). This improvement was maintained one-week post-task (Time 3). Participants in the control (no contact) group (N = 12) did not show a significant improvement in outgroup trust over time. Participants in both groups (direct contact and no contact) showed a non-significant improvement in outgroup attitudes towards black (African) South Africans from Time 1 to Time 2 and from Time 2 to Time 3. Finally, the results confirmed the STE via both attitude generalisation and trust generalisation. The change in outgroup attitudes towards black (African) South Africans from Time 1 to Time 2 significantly predicted more positive outgroup attitudes towards Indian South Africans at Time 2 (controlling for attitudes towards Indians at Time 1). Similarly, the change in outgroup trust towards black (African) South Africans from Time 1 to Time 2 significantly predicted more outgroup trust towards Indian South Africans at Time 2 (controlling for trust towards Indians at Time 1).

OPSOMMING

Die kontakhipotese (Allport, 1954) stel voor dat positiewe kontak tussen groepe vooroordeel verminder. Allport (1954) se formulering van die kontakhipotese het baie invloed gehad en eksperimentele navorsing het die basiese beginsels daarvan bevestig (Pettigrew & Tropp, 2006, 2008). Die kontakhipotese het sedertdien tot ‘n teorie met belangrike implikasies ontwikkel (Hewstone, 2009; Hewstone & Swart, 2011). Kontakteorie (Allport, 1954; Pettigrew, 1998; Tausch & Hewstone, 2010) is een van die mees ondersoekte raamwerke vir die vermindering van tussengroep vooroordeel en 'n meta-analise van 515 studies het vasgestel dat daar 'n beduidende negatiewe verband is tussen kontak en vooroordeel (Pettigrew & Tropp, 2006). Daar is ook getoon dat die vooroordeel-verminderde voordele van intergroepkontak veralgemeen tot buite die oorspronklike kontaksituasie of die spesifieke buitegroep wat teëgekom is (Pettigrew & Tropp, 2006). Daar is ook bewyse dat kontakeffekte veralgemeen vanaf ontmoetings met een buitegroep tot houdings teenoor ander buitegroepe buite daardie kontaksituasie ('n 'sekondêre oordrageffek'; Pettigrew, 2009). Die huidige navorsing het die sekondêre oordrageffek (SOE) van kontak onder 'n steekproef van wit vroulike Suid-Afrikaanse studente wat aan die Universiteit Stellenbosch studeer, ondersoek. Resultate toon aan dat deelnemers (N = 25) wie met 'n vroulike swart (Afrikaan) Suid-Afrikaanse navorsingskonfederaat in 'n direkte induksietaak direkte kontak gehad het, na die taak 'n beduidende toename in buitegroepvertroue teenoor swart (Afrikaan) Suid-Afrikaners ervaar het teenoor hul tellings van buitegroepvertroue een week vroeër (tyd 1 basislyn). Hierdie verbetering is een week na die taak (Tyd 3) behou. Deelnemers aan die kontrolegroep (geen kontak; N = 12) het nie mettertyd 'n beduidende verbetering in buitegroepvertroue getoon nie. Deelnemers aan albei groepe (direkte kontak en geen kontak) het 'n nie-beduidende verbetering in hul buitegroephouding teenoor swart (Afrikaan) Suid-Afrikaners getoon vanaf Tyd 1 tot Tyd 2 nie, en ook nie van Tyd 2 tot Tyd 3 nie. Ten slotte het die resultate die SOE bevestig deur middel van beide houding-veralgemening en vertroue-veralgemening. Die verandering in buitegroephouding teenoor swart (Afrikaan) Suid-Afrikaners vanaf Tyd 1 tot Tyd 2 het beduidend meer positiewe buitegroephoudings teenoor Indiër-Suid-Afrikaners teen Tyd 2 voorspel (daar is vir die Tyd 1 buitegroephoudings teenoor Indiërs beheer). Net so het die verandering in buitegroepvertroue teenoor swart (Afrikaan) Suid-Afrikaners vanaf Tyd 1 tot Tyd 2 beduidend meer buitegroepvertroue teenoor Indiese Suid-Afrikaners teen Tyd 2 voorspel (daar is vir die Tyd 1 buitegroepvertroue teenoor Indiërs beheer).

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CHAPTER ONE

An Introduction to Intergroup Contact in South Africa

In a desegregated, post-apartheid era, South Africa remains deeply divided and inequality persists (Durrheim & Dixon, 2018). While Apartheid has legally ended, intergroup relations in South Africa are still characterised by limited intergroup contact, continued segregation, discomfort, and a sense of mistrust (Durrheim & Dixon, 2010; Gibson, 2006). Racial categories still exist, with many South Africans still experiencing race-related issues (Pillay & Collings, 2004; Slabbert, 2001). In 1948 the National Party, led by Dr Malan, introduced Apartheid in South Africa as part of its campaign in the elections. Apartheid formalised and legalised segregation based on a race. A mixture of inside and outside pressure finally led to the dismantlement of the apartheid government and the first democratic elections in which South Africans of all races were able to vote were conducted in April 1994 (Bornman, 1994). However, research suggests that black, Indian and white South African individuals continue to self-segregate by race (Schrieff, Tredoux, Finchilescu, & Dixon, 2010). Today universities and suburban zones in South Africa still remain mostly racially similar (Swart, Hewstone, Christ, & Voci, 2011a).

In this chapter I discuss the introduction of Apartheid in South Africa. Next, I discuss intergroup relations in South Africa today, after which the contact theory as a theoretical framework is briefly discussed. Lastly, the present study is introduced and an overview of all the chapters in this thesis is given.

The Introduction of Apartheid in South Africa

A pre-occupation with racial separation can be perceived throughout the historical changes in intergroup relations seen in South Africa (Bornman, 1994). In the 17th century Western and European colonisers arrived in South Africa. During this period, Khoikhoi (San) and black South Africans were by now already established in South Africa. South Africa's national day was known as the "Day of the Covenant" in remembrance of the white colonists' victory over 12,000 Zulu warriors at the Battle of Blood River in 1838.

Most Indians arrived between 1860 and 1911, either as indentured contract workers or traders who came of their own accord from India. The Natal Act of No.14 (1859) enabled Indians to work in South Africa and the Colony of Natal imported 152 184 Indians to work

primarily on the sugar plantation (Harris, 2010). This led to Kwazulu-Natal having the largest population of Indians, outside of India. In 1891 this law was amended to discourage further immigration. Law 14 of 1859 also sanctioned indentured Indians to purchase back the last two years of their commitment by a payment of 5 pounds to the British, but this provision was removed in I864 (Huttenback, 1966).

For liberal historians, 1948 is regarded as a critical time in the history of South Africa and, more particularly, in the history of black South Africans. This is the year that the Nationalist Government (the Nationalist Party, NP) of Dr D. F. Malan came into rule. The National Party advocated a strongly segregationist ideology grounded, in the 1950s, on cultural differences and racial subordination (Christie, Collins, Christie, & Collins, 2016). The 'Purified' Nasional Party's (Gesuiwerde Nasionale Party) (GNP) Transvaal leader, J. G. Strydom, told the party's 1936 regional parliament that they had to keep the white race white (Hyslop, 2012). The National Party was pro-apartheid and they strongly held that the one way to preserve their way of life was to dominate South African blacks. Once the NP gained control, they deliberately executed their plot to take over the political structure and put their own imprint on the South African regime. NP tyrants had no desire to share control with the black South Africans or any minority group for that matter.

Throughout Apartheid South Africa experienced forceful racial segregation. In South Africa, the apartheid system endeavoured to control intergroup contact in all areas of day-to-day life (Holtman, Louw, Tredoux, & Carney, 2005). During Apartheid, there was intense ethnic and racial struggle and intergroup contact was not the custom for most South Africans (Durrheim & Dixon, 2010). All South Africans were aware that the then strict norms punished any equal-status interracial contact (Pettigrew, 1998). Therefore, contact opportunities were scarce and contact was difficult; this led to intergroup relations deteriorating (Stefaniak & Bilewicz, 2016). Contact during apartheid was characterised by a sense of anxiety and distrust (Oskamp, 2013). This intergroup separation guaranteed smouldering resentment and conflict. Owing to this history, intergroup relations are an important social concern in South Africa, where Dr T. E. Donges infamously alleged that contact produced conflict and that it was therefore necessary to reduce contact between races (Durrheim, 2005). This is the belief that Apartheid was built on. Apartheid was thus constructed on the opposite of the contact theory, that is, maintaining that contact would lead to war (Durrheim, 2005). Apartheid was a system of rules and policies used to institutionalise complete racial segregation (Wolpe, 1972).

Legalising Intergroup Segregation during Apartheid

In 1950 the Population Registration Act was approved. It provided for the obligatory registration of all people in the country and the assigning of a race classification to them (Christopher, 1992). The Act enforced the classification of all people into four distinct racial categories: White, coloured, Indian, and black (African). This meant that every single resident would be subject to one authorised act of racial classification, the outcome of which would be conserved in the form of a certified identity document (Posel, 2001b). The strategy was an effort to produce fixed, unchanging and undeviating measures for racial classifications which would then be binding across all domains of a person's life (Posel, 2001a). Subsequently, the Group Areas Act (1950) was introduced. It provided for the enforced zoning of all urban zones into exclusive group areas (Christopher, 1992). The Group Areas Act provided for the setting aside of isolated areas for each of the demarcated population groups in an urban area (Christopher, 1992). This segregation was imposed everywhere, in urban areas, schools, parks, beaches, churches and more. Towns and cities came to be well-defined by race. Masses of people were forcibly removed from their homes and moved to their allotted racialised group area (Foster, 2005).

The pass laws were enacted in 1952 in South Africa. Legislation like the Natives Resettlement Act of 1954 provided the authority and the equipment for mass removals (Baldwin, 1975). This Act provided for the removal of Africans from parts of Sophiatown, Martindale, Newclare, and Pageview in Johannesburg and their relocation to Meadow lands and Diepkloof (Fair & Shaffer, 1964). The Surplus People Project (SPP) projected that between 1960 and the early 1980s, when population rearrangement was at its most intense, approximately 3.5 million people were forcibly moved. In 1953 the Reservation of Separate Amenities Act was passed. Apartheid, correspondingly, negatively affected education for black South Africans. Numerous opportunities for tertiary education, mostly at respected universities, were provided for white South Africans, whereas such opportunities were rare for non-white South Africans.

Furthermore, the development of intimate relationships, such as marital and sexual relations between people of different ethnicities were officially barred by the Prohibition of Marriages Act of 1949/1968. This led to a collapse of intergroup relationships. Apartheid in South Africa was used as a means of reducing intergroup conflict, but rather, it led to additional intergroup conflict.

Intergroup Relations in South Africa Today

Today, millions of diverse people live in South Africa. South Africa now has 11 official languages, and The Constitution of the Republic of South Africa (1996) safeguards equal rights for all South Africans. The government has tried to promote unity and reconciliation in the new South Africa and has employed many nation-building strategies, in hopes of moving on from the past. Yet, predictably, South Africans have complex and hesitant opinions toward those of the opposite race. Gibson and Claassen (2010) suggest that true reconciliation necessitates that South Africans of every single race accept all their fellow peoples as equals, extending dignity and respect to them. Historical and current inequalities in South Africa, as well as the building of trust between groups, will take many years to resolve. These processes take time and require the involvement of all sectors, including businesses, governments, nongovernmental organisations (NGOs), schools and universities, and individuals (Potgieter, 2018). On a positive note, the end of apartheid, a pernicious policy of non-contact, has made positive interracial interaction possible in South Africa (Durrheim & Dixon, 2018), even if continued segregation and social inequality have made such contact often more of a possibility than an actuality.

Research shows that black, Indian and white South African individuals continue to self-segregate by race (Schrieff et al., 2010). Even though segregation and apartheid formally ended in 1994, the effects remain in South Africa to this day. With South Africa being more than 24 years post-apartheid, we need to understand why this segregation continues to persist. Data collected by the Institute for Justice and Reconciliation (IJR), suggests that social change has been slow. While most South Africans believe that intergroup relations have improved since the end of Apartheid, many believe that it has stayed the same. According to the IJR (2013), there are even some South Africans who believe that intergroup relations have worsened in the new South Africa.

Universities and suburban zones remain ethnically similar (Swart et al., 2011a). According to a survey undertaken by the IJR, very few South Africans engage in daily cross-group interactions. One of the big reasons for this seems to be the economic and social disparity across different race groups. Black South Africans continue to occupy a lower status than White South Africans (Swart et al., 2011a), especially economically, where white South Africans persist in having economic advantage, despite the political and numerical superiority of black South Africans (Cakal, Hewstone, Schwär, & Heath, 2011). Interestingly, South Africans of either race with a higher economic status, engage in more cross-group interactions, while those

South Africans with lower economic status reported much less intergroup interactions (IJR, 2013). Thus, white South Africans report more daily intergroup interactions than do black South Africans, since most white South Africans are economically superior when compared to most black South Africans.

Promisingly, many South Africans seem to want to improve on their cross-group relationships and learn more about other ethnic groups. This is positive, because learning new information can correct negative interpretations of a group (Allport, 1954) and it can lead to more contact by reducing doubt about how to interact with people from other groups (Stephan and Stephan, 1985).

Contact should be particularly effective in schools (and universities), where occasions for direct contact with peers from diverse backgrounds are more likely to occur (Turner & Cameron, 2016). At Stellenbosch University in 2016, 61.3% of enrolled students were white, 18.3% African black, 17.6% coloured and 2.8% Indian ("Statistical Profile," 2014). Since there is a diverse body of students enrolled in Stellenbosch University, this University offers more opportunities (than most other places/institutions) for contact amongst South Africans.

Contact Theory as a Theoretical Framework

Allport (1954) introduced the most significant contribution to intergroup contact theory in his book, *The Nature of Prejudice* (Pettigrew & Tropp, 2006). In its most straightforward form, the contact theory states that interaction with members of a different group lessens prejudice toward the group. Allport's formulation continues to obtain support across a range of circumstances, groups, and societies (Pettigrew, 1998). In addition, the past decade has observed a strong renewal of research and academic curiosity in Allport's (1954) intergroup contact theory (Pettigrew, Wagner, Christ, & Stellmacher, 2007). What was formerly a modest "contact hypothesis", put forward by Allport (1954), has now developed into a complete theory of significant complexity (Pettigrew, Tropp, Wagner, & Christ, 2011). Allport detailed four conditions for optimal intergroup contact: equal group status, common goals, intergroup cooperation and authority support (Pettigrew, 1998). But, in the meantime, research has found that though these conditions have been revealed to help the effect, they are facilitative, rather than necessary (Pettigrew et al., 2011).

Results from Pettigrew and Tropp's (2006) meta-analysis showed that intergroup contact effects stereotypically generalised beyond participants in the direct contact situation.

In other words, not only did attitudes toward the immediate participants generally become more favourable, but so did attitudes toward the whole outgroup, outgroup members in other situations, and even outgroups not involved in the contact (Pettigrew & Tropp, 2006). This is termed the 'secondary transfer effect' (STE) and is a core focus of the present research.

Overview of the Present Study

This empirical part of this thesis was a replication of an experimental study undertaken by Openshaw (2015). Openshaw's (2015) experiment suffered from a lack of power and the primary motive for attempting to replicate Openshaw's study was to try and replicate the pattern of her results (as far as they related to the direct contact effects) with a sufficiently powered sample. The present study aimed to make the unique contribution of replicating Openshaw's (2015) results relating to direct contact effects with a sufficiently powered sample.

Openshaw (2015) tested three main hypotheses. First, she hypothesised that direct and extended contact with a black (African) South African confederate would lead to reduction in intergroup anxiety towards black (African) South Africans over time. Second, that direct and extended contact with a black (African) South African confederate would promote more positive attitudes towards black (African) South Africans over time. Third, that direct and extend contact with a black (African) South African would also promote more positive attitudes towards Indian South Africans, eliciting the secondary transfer effect of contact. Openshaw (2015) undertook a three-wave longitudinal experimental study amongst white South African students at Stellenbosch University (N = 58), using two experimental groups (direct and extended) and a control group. The findings showed that the experimentally manipulated contact reduced intergroup anxiety towards black (African) South Africans. These effects were, however, non-significant, and suggested that the study may have been under-powered. Moreover, the findings showed that experimentally manipulated contact significantly improved outgroup attitudes and outgroup trust towards black (African) South Africans in the direct contact condition, as well as the extended contact condition. Finally, the study found significant evidence for the operation of the secondary transfer effect via attitude generalisation (Openshaw, 2015).

The present study formed part of a larger replication effort. The results of the extended contact condition were reported by Berry (2020). In the present study, the secondary transfer effect was studied by exploring whether contact with the primary outgroup (the black South

African confederate), improved attitudes towards the secondary outgroup (Indian South Africans) at Stellenbosch University (i.e., a secondary transfer effect). An experimental design was used to manipulate direct contact for participants placed in the experimental (but not the control) condition Data was collected at three time points, each spaced one week apart: pre-test (one week before the interaction, for participants in the experimental condition), immediate post-test (immediately after the interaction, for participants in the experimental condition), and delayed post-test (one week after the interaction, for participants in the experimental condition).

Overview of Chapters

Chapter one first discusses South African Apartheid. It then provides an overview of South Africa today and introduces contact theory as a theoretical framework. Chapter two gives an overview of Allport's (1954) contact theory. Contact as a means of reducing prejudice is highlighted, with a focus on cross-group friendships which encompasses most of Allport's optimal conditions. Mediators of the contact-prejudice effect are then discussed, with a focus on anxiety and self-disclosure as the mediating variables. This chapter also examines the secondary transfer effect (STE), reviews relevant evidence and considers explanations for it. Chapter three outlines the present study. It contains a discussion of the hypotheses tested, and the methods used, in this this thesis. It also comprises a discussion of the rationale, objectives and aims, theories and approaches associated with the present study, as well as a presentation of the outcomes. Chapter four concludes this thesis with a discussion of the results of the present study. This discussion places the conclusions and contributions of the present study within the framework of the existing intergroup contact literature on the secondary transfer effect. It also addresses limitations of the present work and offers guidelines for future research.

CHAPTER TWO

The Contact Hypothesis

The apartheid administration in South Africa endeavoured to control, indeed restrict, intergroup contact in all domains of day-to-day life (Holtman et al., 2005). The spans of racialised domination and manipulation – oppression, colonial overthrow, official segregation, labour mistreatment, apartheid and legalised discrimination – have left profound traces. First of all, we need to be reminded that apartheid was a comprehensive endeavour at spatial engineering (literally millions of individuals were removed, against their will, to racialised 'group areas'). Apartheid has now been disbanded. Regardless of the removal of the official racialised barriers and the aspiration of equal opportunity for all, South Africa remains a decidedly unequal society (Foster, 2005). This is common in post-conflict societies, such as post-apartheid South Africa.

Development of the Contact Hypothesis

In the mid-1950s, Allport's (1954) *The Nature of Prejudice* transformed the discipline (Tropp & Pettigrew, 2004). Allport made a huge impression on social psychology and the study of intergroup relations (Tredoux & Finchilescu, 2007). The "contact hypothesis" (Allport, 1954) is today the most significant and unquestionably the most intensively studied psychological approach to building a more open-minded and cohesive civilization (Dixon et al., 2010). Decades of research have studied the role of intergroup contact in reducing intergroup bias (Tropp & Pettigrew, 2004). Allport (1954) documented that attachment to one's ingroups does not automatically necessitate antagonism toward outgroups (Brewer, 1999).

The contact hypothesis states that, under the correct circumstances, contact amongst members of diverse groups will lead to more positive intergroup relations (Crisp & Turner, 2009; Pettigrew, 1998) and a meta-analysis of 515 studies has confirmed the fundamental proposition: there is a highly significant, negative relationship (albeit of small effect size) between contact and outgroup attitudes (Pettigrew & Tropp, 2006). The impression that positive intergroup contact may perhaps be used to encourage improved intergroup relations and decrease bias was definitely started in America, originally by Williams (1947) and later by Allport (1954). The most effective form of contact for improving outgroup attitudes comes in the form of cross-group friendships. This form of contact, has more unvarying success at

improving intergroup attitudes (Pettigrew, 1997, 1998) and, with the exception of authority sanction, cross-group friendship meets Allport's conditions (Pettigrew et al., 2007). Pettigrew (1997) has shown that intergroup friendships are particularly linked with reduced bias, or more positive outgroup attitudes. New information about an outgroup can improve attitudes (Pettigrew, 1998). The basic rationale for the contact theory is that prejudice can be reduced as one learns more about a group of people (Schiappa, Gregg, & Hewes, 2005), since this can reduce anxiety and mistrust. As Schiappa et al.'s (2005) review of the literature on the contact theory indicated, attitude change results from a combination of factors, including new information about a group and gaining a sense of trust of the group. This will be discussed in further detail below.

Support for the Contact Hypothesis

Multiple reviews have presented wide-ranging support for contact theory, signifying that intergroup contact stereotypically decreases intergroup bias (Pettigrew, 1998; Pettigrew & Tropp, 2008; Pettigrew et al., 2011). Nevertheless, additional reviews reached more nuanced conclusions and have been more critical concerning the potential for contact to help promote positive intergroup outcomes (Pettigrew & Tropp, 2006). One of the main concerns was that the positive effects of intergroup contact with an outgroup member did not generalise to the outgroup as a whole.

Since then, further research has revealed the benefits of intergroup contact in reducing prejudice towards groups as diverse as the elderly (Bousfield & Hutchinson, 2010), homosexuals (Collier, Bos, & Sandfort, 2012), and the mentally ill (Couture & Penn, 2003). Though these studies provided strong support, the most important source of support was the meta-analysis undertaken by Pettigrew and Tropp (2006).

Pettigrew and Tropp (2006) reviewed a vast literature of published and unpublished studies and attempted to encompass the entire relevant research base. The meta-analysis included samples from 515 studies with 713 independent samples. These studies took place between 1940 and the end of 2000. With preceding studies having had some limitations, including partial samples of appropriate papers, absence of stringent inclusion rules, and the nonquantitative assessments of contact effects, Pettigrew and Tropp (2006) endeavoured to overcome these by choosing studies for inclusion based on several inclusion criteria. Firstly, because their emphasis was on the relationship between intergroup contact and prejudice, they

considered only those studies in which intergroup contact was the independent variable and intergroup prejudice the dependent variable. Secondly, they only included studies that involved contact between members of distinct groups. This rule guaranteed that they studied intergroup outcomes of contact rather than relational outcomes. Thirdly, for inclusion, the intergroup contact must have been observed directly, conveyed by participants, or transpire in intensive, continuing circumstances where direct contact is inevitable (e.g., small classrooms). This rule also omitted investigations that tried to gauge contact with indirect measures such as information about an outgroup. Lastly, the prejudice dependent variables must have been collected at the level of individual respondents. Consequently, studies relating to the relationships between contact and prejudice were included only if they used individuals as the unit of analysis such that prejudice scores could be studied in relation to individuals' contact experiences. The meta-analysis thus only included data from face-to-face interactions (Pettigrew & Tropp, 2006), that is, direct contact.

Whereas early research on intergroup contact treated Allport's optimal conditions as if they were crucial, Pettigrew and Tropp's (2006) findings showed that Allport's conditions facilitate contact's reduction of intergroup prejudice. The results showed that establishing Allport's optimal conditions in the contact situation commonly increased the positive effects of intergroup contact. Although 94% of the 713 samples in the meta-analysis presented an inverse relationship between intergroup contact and prejudice, and only 19% of those samples involved contact conditions that met Allport's conditions, the overall meta-analysis found that intergroup contact typically reduced intergroup prejudice. Numerous tests of potential moderator variables indicated that this association did not result from either participant selection or publication biases, and the more rigorous studies generated greater mean effects. The meta-analysis thus provided considerable backing for the value of contact, discovering reasonable to strong associations between contact with outgroup members and more positive attitudes toward the outgroup as well as reduced endorsement of damaging outgroup stereotypes (Pettigrew & Tropp, 2006). Pettigrew and Tropp (2006) also found that high quality contact experiences, such as cross-group friendships, had an even bigger impact on prejudice reduction, and that the effect size of contact was greater for studies that did, versus those that did not, meet Allport's 'optimal' conditions.

Dimensions of Contact

Over the last two decades, the contact literature has moved past reviewing whether intergroup contact does truly decrease outgroup prejudice, to finding different dimensions of intergroup contact that might be associated with reduced prejudice. The effects of contact depend to a great degree on the contact condition itself (Amir, 1969). As stated, the present research was part of a larger study about both extended contact and direct contact. However, the dimensions discussed below only focus on direct contact as that is the focus of the present research.

Islam and Hewstone (1993) studied inter-religious contact amongst Muslims (majority) and Hindus (minority) in Bangladesh (Hewstone, 2009). Islam and Hewstone (1993) developed a five-item scale to tap qualitative aspects of contact (e.g., superficial vs. intimate contact; Van Dick et al., 2004). Hindu and Muslim undergraduates gave their approximations of how much contact, and of what nature, they had with members of the other faith, and indicated whether that contact was more intergroup or interpersonal (Hewstone, 2009). In their study Islam and Hewstone found a considerably bigger influence of quality than of quantity of contact between the two groups on intergroup anxiety and attitudes toward the outgroup (Van Dick et al., 2004). These results have been replicated in several studies, across many target groups, including South Asians in England (Prestwich, Kenworthy, Wilson, & Kwan-Tat, 2006), Italian students (Voci & Hewstone, 2003) and the elderly (Tam, Hewstone, Harwood, Voci, & Kenworthy, 2006). Voci and Hewstone (2003) similarly found that Italian undergraduates' quality and quantity of contact with African immigrants was associated with more positive outgroup attitudes and less indirect bias. Again, Prestwich et al. (2006) found that more contact quality was connected to more positive explicit attitudes, while contact quantity was associated with more positive implicit attitudes.

However, according to the meta-analysis undertaken by Pettigrew and Tropp (2006), contact quality has a stronger connotation to reduced bias than does contact quantity. Quality of contact, such as friendship potential, looks to be key (Eller & Abrams, 2004). It is this quality of contact, such as the quality of contact in cross-group friendships, that I highlight in this thesis.

Cross-group friendships are particularly important and high in quality. But, before taking a closer look at the importance of cross-group friendships for the reduction of outgroup

prejudice, it is appropriate within the context of the present study to first contemplate the development of interpersonal friendships in general.

Interpersonal Friendships

In their defining article on the importance of belongingness to happiness, Baumeister and Leary (1995) proposed the ‘‘belongingness hypothesis”, which contended that people have a persistent ambition to get and preserve at least some permanent and encouraging interpersonal friendships. In other words, the need to belong drives individuals to preserve relationships (Seidman, 2013). A diversity of patterns supports the interpretation that individuals try to preserve relationships and evade ending them (Baumeister & Leary, 1995). Again, and again Baumeister and Leary (1995) found evidence of a rudimentary yearning to form social attachments. Numerous academics have subsequently proposed that the human drive for interpersonal friendships echoes an inborn tendency that is critical for being (Lambert et al., 2013).

Another possible theory for interpersonal friendships is the self-expansion model. The model developed by Aron, Aron, and Norman (2001) provides another lens through which interpersonal friendships can be considered. This self-expansion allows individuals to develop their self-efficacy by gaining access to additional their physical and social resources. This happens by including another in the self by believing that you are becoming more similar and by expanding your notion of your ‘self’ to encapsulate – or overlap with – close others. This process allows for the development of the self and for the development of interpersonal skills.

One key concept for friendship is reciprocal self-disclosure. Self-disclosure plays a fundamental part in the development and preservation of relationships. Self-disclosures comprise the act of revealing personal information about oneself to another. Self-disclosure has been the focus of much academic research on close relationships, across a number of disciplines, including psychology, communication, and sociology (Collins & Miller, 1994).

There are also sex differences in friendships. One area of substantial disagreement concerns possible differences in the same-sex friendships of females and males. Stereotypes about same-sex friendships exist but evidence is inconsistent. To the degree that conversation is a kind of proxy for the sharing of personal information, females' larger rates of recurrence of getting together to talk may well show more emotive sharing in all-female friendships (Caldwell & Peplau, 1982). But any communication can fluctuate in the degree of self-

disclosure present. In well-controlled experimental studies, causal associations could be inferred. One causal relationship inferred is that higher levels of self-disclosure lead to increased fondness for the discloser (Collins & Miller, 1994).

Cross-group Friendships

The cross-group friendship hypothesis (Pettigrew, 1997) advocates that a decrease in group bias might be accomplished through encouraging friendship between members of opposing groups. According to this hypothesis, to attain generalisation, the contact condition must afford the participants the opportunity to become friends (Pettigrew, 1998). The benefits of cross-group friendships for both ingroup and outgroup members, such as more positive intergroup attitudes, reduced intergroup anxiety, and heightened individual expansion, are extensively recognised (Levin, van Laar, & Sidanius, 2003; Pettigrew, 1998). Several research studies have documented these benefits of cross-group friendship for intergroup attitudes (Mendoza-Denton & Page-Gould, 2008). Cross-group friendships are correspondingly associated with reduced bias toward the outgroup (Paolini, Hewstone, Cairns, & Voci, 2004). Research on both naturally occurring and experimentally formed cross-group friendships proposes that cross-group friendship improve intergroup experiences (Page-Gould, Mendoza-Denton, Alegre, & Siy, 2010). In cross-group friendships it is hypothesised that group individualities become noticeable, and the beneficial decisions and sentiments associated with companionship generalise to the groups to which participants belong (Paolini et al., 2004; Pettigrew, 1997). It looks as if the actions of the specific outgroup member in the cross-group friendship impact the liking felt for the outgroup as a whole.

Intimacy in these friendships is crucial for reducing prejudice. Intimacy is a self-motivated process which is best detected in the pattern of communication and feedback between two individuals (Reis & Shaver, 1988). More positive explicit outgroup attitudes are also mediated by self-disclosure in the context of friendships (Turner, Hewstone, & Voci, 2007). Self-disclosure is a process strongly caught up in the expansion and conservation of friendships and it can be particularly significant in the framework of cross-group relationships (Turner et al., 2007). Studies also discovered that the quantity and quality of contact promote higher levels of self-disclosure and that quantity of contact is associated with additional favourable implicit connotations, whereas quality of contact is associated with further favourable explicit attitudes and higher levels of self-disclosure are associated with empathy

and reduced anxiety, which in turn are associated with more positive explicit attitudes (Tam et al., 2006). Self-disclosure improves explicit outgroup attitudes by means of empathy and intergroup trust (Turner et al., 2007). Intergroup contact and specifically cross-group friendships might allow one to take the perspective of outgroup members and empathise with their anxieties (Pettigrew & Tropp, 2006). These conclusions support Pettigrew's (1998) interpretation that self-disclosure is a fundamental process in cross-group friendship.

Research and theory suggest that positive experiences with a cross-group friend can have a positive impact on intergroup relations that reaches outside the context of the friendship (Allport, 1954; Paolini, Hewstone, Rubin, & Pay, 2004; Pettigrew & Tropp, 2005). Additionally, research has shown that even when Allport's (1954) optimal conditions were not met, cross-group friendships still led to reduced prejudice.

Pettigrew (1997), who analysed cross-sectional data from probability samples collected in France, Great Britain, the Netherlands, and West Germany, found that individuals with outgroup friends had significantly less prejudice toward the group and that the development of intergroup friendships played a key role in the way contact reduced bias. These results point to the critical importance of intergroup friendship and stress the mediating role of knowledge about the outgroup (Eller & Abrams, 2004). Turner, Hewstone, and Voci, (2007a, study 1) also conducted a cross-sectional study amongst white British elementary school children between the ages of 8.1 and 11.9 years (N = 60). In the study they found that cross-group friendships were reliably associated with reduced prejudice.

Levin, Van Laar, and Sidanius (2003), on the other hand, undertook a longitudinal study. They aimed to study the effects of ingroup and outgroup friendships on ethnic attitudes in college students. Data for this longitudinal study were collected from over 2000 White, Asian, Latino, and African American university undergraduates. Of these undergraduates, 32% were White, 36% Asian American, 18% Latino, 6% African American, and 8% were of another ethnicity or did not report their ethnicity. Data for this longitudinal study were collected amongst students who were beginning their freshman year of college at UCLA in 1996. Levin et al. (2003) found that students who reported having more cross-group friendships were less prejudiced and that those students with fewer cross-group friends were more biased towards ethnic outgroups.

More recently, Binder et al. (2009) undertook a two-wave longitudinal study. The original sample in Wave 1 of data collection contained 3,667 participants from a total of 33

secondary schools who partook on a voluntary basis: 1,034 in Belgium, 1,124 in England, and 1,509 in Germany. They found that even though both quantity and quality of cross-group friendships remained significant in the reduction of prejudice, the self-reported quality of cross-group friendships played a more imperative role than quantity of cross-group friendships in the reduction of prejudice.

Similar results have been found in South Africa. Swart, Hewstone, Christ, and Voci (2010) conducted two cross-sectional survey studies among majority-status white and minority status coloured high school students in South Africa. They explored the effects of cross-group friendship on emotional, quasi-behavioural, and cognitive measures of prejudice in two studies among white and coloured Grade 11 and 12 South African high school pupils (approx. 16 to 18 years of age) from two high schools, one a largely white, boys-only school (approx. 85% white, 10% coloured, and 5% black students), the other a mostly coloured, coeducational high school (approx. 90% coloured and 10% black scholars). In Study 1, cross-group friendships with black (African) South Africans were meaningfully associated with positive attitudes to black (African) South Africans in general for both white and coloured participants. In Study 2, cross-group friendships among white and coloured participants were similarly significantly associated with positive outgroup attitudes.

Similar outcomes were reported by Dixon et al. (2010). Participants comprised a sample of adult (>18 years) black South Africans (N = 596), recruited through a random number dialling phone survey. In an initial phone call, interviewers informed respondents that their mobile numbers had been randomly selected and asked if they would be keen to anonymously take part in a discussion about "race and transformation in South Africa." They found that the quality of contact these participants reported having with white South Africans was significantly negatively associated with prejudice towards white South Africans in general (β = -.36, $p < .01$).

These findings, supporting the inverse relationship between cross-group friendships and prejudice in South Africa, have also been observed longitudinally. Swart et al. (2011a) collected data at three time points. The three waves were approximately 6 months apart. Swart et al. (2011a) found that cross-group friendship at Time 1 was significantly associated with less prejudice at Time 3. Studies, however, suggest that cross-group friendships are rare in South Africa (Schrieff et al., 2010).

The Fast-Friends Paradigm

One operative method of generating close interpersonal contact is the Fast-Friends closeness-induction technique (Welker, Slatcher, Baker, & Aron, 2014). The Fast-Friends paradigm is a series of controlled communications in which new contacts participate in reciprocated self-disclosure and trust building, fast-tracking developments associated with friendship creation (Tropp & Mallett, 2011). The Fast-Friends method was intended to increase group cohesion and friendship amongst strangers through closeness-building tasks (Page-Gould, Mendoza-Denton, & Tropp, 2008).

Given its effectiveness in forming interpersonal friendship and self-disclosure, the Fast-Friends task has been applied in forming cross-group friendships, showing that it is advantageous for improving attitudes toward outgroups following a cross-group interaction (Davies, Tropp, Aron, Pettigrew, & Wright, 2011; Page-Gould et al., 2008; Wright, Aron, McLaughlin-Volpe, & Ropp, 1997). Page-Gould et al. (2008) used a similar "fast friendship procedure" in their study amongst students, wherein they attempted to develop intimacy between white and Latino participants under experimental conditions. They found that being partnered with an outgroup member led to reduced intergroup anxiety and more positive outgroup attitudes towards the outgroup over the course of the experimentally manipulated intergroup encounter.

Mediators of the Contact-Prejudice Relationship

Research has endeavoured to illuminate in what manner the diverse aspects of intergroup contact function to decrease prejudice (Dovidio & Gaertner, 1999). Researchers have been rigorously testing these potential mediators of the contact-prejudice relationship (Pettigrew & Tropp, 2008). These results correspondingly shed light on how these mediators function (Turner, Hewstone, Voci, & Vonofakou, 2008). Two possible mediators of the contact-prejudice relationship that are most related to the present study are considered in further detail below, i.e., intergroup anxiety and self-disclosure.

Intergroup Anxiety

Intergroup anxiety is the construct that describes the ambiguous feelings of discomfort or anxiety when interacting with members of other groups and can be defined as the arousal

that occurs during cross-group interactions (Stephan & Stephan, 1985). In other words, it is a negative emotional response that can transpire at the prospect of having to participate in an intergroup encounter (Crisp & Turner, 2009). Evidence in support of the mediational role of intergroup anxiety is impressive (Pettigrew & Tropp, 2008). According to Stephan and Stephan (1985) intergroup anxiety arises because people have negative expectations of rejection, discrimination, or humiliation during cross-group interactions. Various researchers have found that intergroup contact, mostly the quality of preceding contact with outgroup members, is strongly negatively associated with intergroup anxiety (Greenland & Brown, 1999; Stephan, Diaz-Loving, & Duran, 2000). Additionally, intergroup anxiety is associated with an assortment of negative responses to outgroup members, such as intergroup prejudice and negative attitudes toward outgroup members (Greenland & Brown, 1999; Stephan et al., 2000).

Intergroup anxiety is associated with reduced intergroup contact with others in general, because anxious people try to avoid anxiety-inducing situations like intergroup contact (Turner et al., 2008). The propensity to evade intergroup relations is strongly influenced by the anxiety individuals experience in response to such exchanges (Plant & Devine, 2003); this makes making cross-group friends all the more difficult. Studies have shown repeatedly that contact can lessen feelings of risk and anxiety about impending cross-group relations (e.g., Paolini et al., 2004).

Voci and Hewstone (2003) conducted two studies investigating intergroup contact effects in Italy. In Study 1, Voci and Hewstone (2003) found that Italian students' quality and quantity of contact with African immigrants was associated with more positive outgroup attitudes and less subtle prejudice, mediated by reduced intergroup anxiety. In Study 2, Voci and Hewstone (2003) found that 94 hospital employees' contact at work had direct effects on outgroup attitudes and rights for immigrants, and an effect on attitudes toward ethnic co-workers that was mediated by intergroup anxiety at work. Again, contact was negatively associated with intergroup anxiety.

Turner et al. (2007) explored the mediation effect of intergroup anxiety between contact and prejudice across three cross-sectional studies. All the studies were conducted in the context of relations amongst South Asians, the largest minority group in the United Kingdom, and the white British majority. Their first study focused on the effects of cross-group friendship on implicit and explicit attitudes toward Asians amongst white British elementary school children (N=60), showing mediation by means of intergroup anxiety. As predicted, cross-group friendships amongst white elementary school children predicted more positive explicit

outgroup attitudes toward South Asians, mediated by intergroup anxiety. Intergroup anxiety was significantly negatively associated with explicit positive attitudes in general.

Their second study was conducted among British Asian and white high school students (N = 96) in Bradford, a town in northern England. Of these 48 were white and 48 were Asian. In Study 2, they similarly confirmed intergroup anxiety to be a mediator of the effect of contact. To confirm the findings from their first two studies, they conducted a third study with an independent sample of White British high school students (N = 164). Study 3 replicated these findings (Turner et al., 2007).

Two South African cross-sectional studies undertaken by Swart et al. (2010) considered the effects of cross-group friendship on prejudice and anxiety as a mediator of this relationship. In both studies intergroup anxiety presented the strongest mediational effects. In Study 1, intergroup anxiety mediated the total effect of cross-group friendships on outgroup attitudes: cross-group friendship was negatively associated with intergroup anxiety ($\beta = -.71$, $p < .001$), which, in turn, was negatively associated with outgroup attitudes ($\beta = -.47$, $p < .001$). This result was replicated in Study 2, which found that intergroup anxiety significantly, and completely, mediated the over-all effect of cross-group friendships: cross-group friendships had a noteworthy negative association with intergroup anxiety.

Meta-analytic findings on the contact-prejudice relationship support these findings. Specifically, a meta-analysis by Pettigrew and Tropp (2008) assessed the processes through which intergroup contact decreases bias. In their analysis of three mediators (intergroup anxiety, knowledge, and empathy), intergroup anxiety was shown to be the strongest mediator of the contact-prejudice relationship.

Direct contact aims to reduce intergroup anxiety as it leads to individuals avoiding contact with other groups. The value of the contact is, however, also associated with increasing factors that lead to more contact; one such factor is self-disclosure.

Self-disclosure

Self-disclosures comprise the act of revealing personal information about oneself to another (Collins & Miller, 1994). Self-disclosure is a relationship-evolving mechanism (Pettigrew, 1998). Self-disclosure is a process strongly implicated in the progress and upkeep of friendships and it can be central in cross-group friendships (Turner et al., 2007). Findings

support Pettigrew's (1998) contention that self-disclosure is a fundamental process in cross-group friendship.

Firstly, self-disclosure leads to increased perspective-taking, and it enables individuals to see the world through the eyes of others. Furthermore, self-efficacy is accomplished through intense self-disclosure (Turner et al., 2007). Self-disclosure can result in cross-group friendships, which in turn permits shared goals to be accomplished.

As noted above, Turner et al. (2007) conducted four cross-sectional studies exploring intergroup relations between white British and South Asians. In Study 1, they found that cross-group friendships among white elementary school children predicted more positive explicit outgroup attitude toward South Asians, mediated by self-disclosure. They replicated these results in studies 2 and 3, again with British and South Asian participants.

Reciprocated self-disclosure is a critical factor for the development of close relational bonds and the formation of a sense of belonging and acceptance. Consequently, they are not without difficulty, and interactions between ingroup and outgroup members are typically conducted on an unintentionally superficial level (Amichai-Hamburger & McKenna, 2006).

Mutual self-disclosure is vital for promoting positive intergroup relations in post-conflict societies such as South Africa, specifically the development of outgroup forgiveness and trust (Swart, Hewstone, Turner, & Voci, 2011).

Turner et al. (2007) conducted Study 4 amongst one hundred and forty-two (68 male and 74 female) white British undergraduate students. Study 4 exhibited that self-disclosure improved explicit outgroup attitude and mediated cross-group friendships amongst British and South Asian students.

Achieving greater trust in intergroup relations.

In the abovementioned study (Study 4), Turner et al. (2007) found that self-disclosure predicted greater outgroup trust. Self-disclosure was associated with more positive attitudes because it encouraged mutual trust. Participants who had self-disclosed to the outgroup were more likely to trust and feel trusted by the outgroup. Thus, self-disclosure through dialogue is an important feature of achieving reconciliation in post-conflict societies such as South Africa.

An increasing body of research has revealed that positive contact with outgroup members can decrease threat perceptions (Pettigrew et al., 2007) and increase outgroup trust

(Dhont & Van Hiel, 2011). With a representative sample of Dutch adults (N = 1238), Dhont and van Hiel (2011) studied the moderating effect of direct contact on reducing bias toward immigrants from the Turkish and Moroccan populations, which constitute the two major Muslim groups in the Netherlands. They conducted mediated moderation analyses to test whether trust and perceived threat mediate the moderator effects of direct contact on reduced bias. Significant effects of trust and threat on bias emerged. These analyses established that the presence of trust ($\beta = -.56$, $p < .001$) as well as the addition of threat ($\beta = .55$, $p < .001$) reduced the direct contact interaction effect ($\beta = .09$, $p < .001$). Thus, the finding that contact increases trust matches preceding studies on the positive effects of direct contact on trust (Turner et al., 2007).

Furthermore, the positive connection between contact and forgiveness is mediated by empathy and trust towards the outgroup and by supposed outgroup heterogeneity. Recurrent and high quality intergroup contact can promote intergroup forgiveness by enhancing trust of the outgroup, the quantity of perspective taking, and the observation of outgroup heterogeneity (Cehajic, Brown, & Castano, 2008).

A succession of studies undertaken by Kenworthy, Voci, Tausch, Hughes, and Hewstone (2016) were the first to evaluate the mutual relationship between friendship and trust, which allowed them to illuminate the probable effects of contact on trust, while accounting for the role that trust plays in determining the quantity of contact individuals take part in. The studies used a random sample of the Northern Irish adult population in a longitudinal design and tested cross-lagged relationships between friendship contact and trust toward the outgroup. They anticipated that cross-group friendship would proximally predict outgroup trust as well as positive and negative intergroup sentiments as mediators (Binder et al., 2009). Outcomes for both Protestants and Catholics revealed that cross-group friendship significantly predicted outgroup trust, even after controlling for prior levels of outgroup trust (Kenworthy et al., 2016).

The Secondary Transfer Effect of Intergroup Contact

A critical question is whether the effects of intergroup contact generalise beyond the specific situation in which contact occurs, and group members involved (Pettigrew & Tropp, 2006). Generalisation is fundamental if intergroup contact is to have comprehensive and long-lasting significances. There are three different categories of generalisation. Firstly, there is what is known as situational generalisability, which asks whether the changes generalise across

circumstances. Next, there is individual to group generalisability, which is concerned with whether there is generalisation from the specific outgroup members with whom there was contact to the outgroup in general. Finally, the emphasis is on uninvolved outgroups and asks whether the changes toward the outgroup whose member, or members, have been encountered during intergroup contact generalise to other outgroups not involved in the contact (Pettigrew, 1998). Encouragingly, Pettigrew and Tropp's (2006) meta-analysis found that the prejudice-reducing effects of intergroup contact do typically generalise beyond the particular outgroup exemplar encountered to the whole outgroup, and they develop across a wide-ranging range of contact situations and even other target outgroups.

Generalisation from experience with a primary outgroup to attitudes towards other, secondary, outgroups not involved in the contact condition is the main focus of this thesis. This generalisation from the direct outgroup to additional outgroups not directly involved in the contact, is a higher-order generalisation that may perhaps represent the most comprehensive effects of intergroup contact (Pettigrew, 1997; Tausch et al., 2010). This form of generalisation is termed a 'secondary transfer effect' (STE; Pettigrew, 1997, 2009). The most prominent potential mediating mechanism of the STE, that has been put forward in the literature, is attitude generalisation (Tausch et al., 2010).

Attitude Generalisation and the Secondary Transfer Effect

Attitude generalisation refers to the well-known psychological process through which our attitudes concerning one object (e.g., a group, person, or idea) are generalised to attitudes towards other, similar objects. Attitude generalisation is a process whereby individuals condition their attitudes toward one group grounded upon their attitudes toward another (Flores, 2015). In principle, attitude generalisation need not be restricted to groups that can be classified as similar (e.g., both being ethnic groups). However, numerous studies have shown that objects that seem like one another provoke stronger attitude generalisation effects than objects that seem to be unrelated. This understanding of attitude generalisation is extensively known and acknowledged within the psychological community at large. Attitude generalisation has been shown to take place across a host of spheres, such as objects within computer games, attitudes towards customer goods, and of course our assessments of other individuals. These studies cover a comprehensive selection of empirical paradigms, including instant implied

attitude generalisation vs. gradual overt attitude generalisation (Ranganath & Nosek, 2008) and computer game things (Shook, Fazio, & Eiser, 2007).

Fascinatingly, Allport (1954) himself also suggested this notion of attitude generalisation in his classic work. Allport cited Hartley (1946) who undertook a study in which participants were questioned about their attitudes towards 35 countries and racial groups, of which only 32 were real. The slightly gloomy conclusions reinforced Allport's (1954) idea that if an individual is biased towards one outgroup, they are expected to be prejudiced towards other outgroups as well. From this section on the attitude generalisation hypothesis, we now recognise that attitudes towards an encountered outgroup generalise to other outgroups not involved in the contact condition.

Evidence supporting the STE by means of attitude generalisation has also been found in South African. De Beer (2015) reported evidence not only for the STE of contact, but further noted evidence to suggest that this effect was accomplished through a process of attitude generalisation. Daiber (2017) similarly noted that there was solid evidence to support the mediating role of attitude generalisation in this process of the STE of contact (see also Nell, 2017). The increasing body of literature indicating the operation of the STE of contact via attitude generalisation has led numerous researchers to support this conception of the role of attitude generalisation.

Evidence of the Secondary Transfer Effect

In one extensively cited study, Pettigrew (1997) surveyed and studied a sample of 3806 individuals, belonging to the majority group of four Western European countries, specifically, France, the United Kingdom, The Netherlands and former West Germany, in the fall of 1988. This study recognised the benefits of cross-group friendship for intergroup attitudes (Pettigrew, 1997). Pettigrew (1997) also found that Germans who had positive contact with Turks not only expressed more favourable attitudes of Turks but correspondingly of West Indians, a group whose members are very rare in Germany.

More recently, several studies have revealed that reduced prejudice against one outgroup can generalise to other outgroups that were not involved in the original contact (Pettigrew, 2009). Pettigrew (2009) measured a German national probability sample and found that the positive effects of contact with immigrants generalised to Muslims, Jews, homosexuals, the dispossessed and non-traditional women. Generalisation was stronger for Muslims, the

displaced and homosexuals than for the other groups. Additional evidence was provided by Tausch et al. (2010). In all four of their studies, including one longitudinal study, Tausch and colleagues (2010) found that attitudes toward the primary outgroup mediated generalisation from contact with primary outgroups to more positive attitudes toward secondary outgroups.

Furthermore, Eller and Abrams (2004) showed in a two-wave longitudinal study that contact between British students and French exchange students predicted attitudes toward Algerians, in line with a STE. Van Laar, Levin, Sinclair, and Sidanius (2005) also conducted a five-wave panel study with roughly 2000 students in Los Angeles. They studied the consequence of living with white, Asian American, Latino, or African American roommates on emotional, mental, and behavioural indices of prejudice. Information was collected as part of a five-year longitudinal study amongst university students at the University of California (UCLA). Their findings supported the STE.

Field-experimental research from the Southwest of the US also provided supplementary evidence for the secondary transfer effect (Harwood, Paolini, Joyce, Rubin, & Arroyo, 2011), albeit measured using imagined, not real, contact. Harwood et al. (2011) also studied the mediating role of attitudes. Their experiment studied the effects of imagining contact with an illegal immigrant on attitudes towards illegal immigrants and consequent effects of that attitude transformation on feelings about other groups, i.e., secondary transfer. The effects of positive imagined contact subsequently generalised to attitudes toward comparable outgroups via attitudes toward the primary outgroup. Harwood et al. (2011) found that imagined contact improved attitudes toward several secondary outgroups: Mexican Americans, legal immigrants, Asian Americans, destitute people, political exiles, black people, Democrats, and professors. The effects suggest that imagined contact may be an advantageous method for improving attitudes about groups beyond the specific target group (Harwood et al., 2011).

Finally, there is evidence for the STE through attitude generalisation in the meta-analytic test of intergroup contact theory undertaken by Pettigrew and Tropp (2006). The sample of STE studies did however have some short comings. Firstly, 14 of the 18 samples were only loosely controlled. Furthermore, they did not address how or why these generalisation effects of the secondary transfer effect transpire. Consequent research has started to address these short comings. Notably, Schmid, Hewstone, Küpper, Zick, and Wagner (2012) studied secondary transfer effects of intergroup contact using a unique, comprehensive cross-national assessment. The sample comprised majority group members from eight European countries (N=7042), to study the relationship between intergroup contact with immigrants, and

attitudes towards primary (immigrants) and secondary (homosexuals and Jews) outgroups. Outcomes showed that intergroup contact was not only directly associated with primary outgroup attitudes, but also indirectly associated with secondary outgroup attitudes, via attitude generalisation (Schmid et al., 2012).

In South Africa several studies have also explored the secondary transfer effect and found evidence to support the secondary transfer effect. Notably, both as a pioneering study and as a prelude to the present study, Openshaw (2014) conducted one of the first experimental study of STEs and replicated prior survey studies to find evidence for the secondary transfer effect via attitude generalisation. The secondary transfer effect was tested by investigating whether experimentally induced contact with an encountered confederate from the primary outgroup (black (African) South Africans) improved attitude towards an unencountered outgroup (Indian South Africans) as well. The results provided evidence for the STE in the South African University context. Thus, the secondary transfer effect has received ample support, primarily from cross-sectional survey studies, but also with some longitudinal surveys, and, to date, with one experimental study. Clearly, results of the single prior experiment need to be replicated, which is the focus of the present dissertation.

Alternative Explanations for the Secondary Transfer Effect

In their research Tausch et al. (2010) also addressed some possible alternative accounts for the discovery that contact with one outgroup correlates with attitudes toward secondary outgroups, and by shedding light on the processes underlying the STE. Regarding alternative explanations, there are three possible contenders. First, according to the ‘secondary transfer problem’, participants who engage in more intergroup contact with one outgroup would also have more contact with other outgroups. The second possible alternative explanation for the STE is the ‘social desirability problem’. Third, because most studies reporting STEs relied on cross-sectional data, they cannot deliver a definite indication of whether primary contact effects do undeniably generalise to secondary outgroups, or whether the relationship is due to generally more accepting individuals engaging in more intergroup contact, this is known as the causal sequence problem.

Tausch et al. (2010) conducted three cross-sectional studies and one longitudinal study that sought to rule out alternative accounts of the STE. The first study was conducted among 1,653 adult respondents (800 Greek Cypriots and 853 Turkish Cypriots). The interviews

involved measures of contact with and attitudes toward the Cypriot outgroup (this denotes Greek Cypriots for Turkish Cypriot respondents, and Turkish Cypriots for Greek Cypriot respondents), attitudes toward mainland Greeks/Turks. In Study 1, Tausch et al. (2010) found evidence for the secondary transfer effect. In line with a STE, contact with the Cypriot outgroup significantly predicted attitudes toward mainland Greeks/Turks ($\beta = .14$, $p < .001$). Contact with the Cypriot outgroup correspondingly significantly predicted more positive attitudes towards the Cypriot outgroup ($\beta = .22$, $p < .001$). This first study, however, did not control for previous contact with the secondary outgroup.

In Study 2, Tausch et al. (2010) considered the relationship between contact amongst Catholics and Protestants in Northern Ireland and attitudes toward racial outgroups, while also controlling for contact with the secondary group. The results of Study 2 ruled out this alternative explanation for the secondary transfer effect, consequently giving further support for the STE. Consistent with a generalised contact effect, contact with the ethno-religious outgroup significantly predicted attitudes toward racial minorities ($B = 2.49$, $SE = .50$, $\beta = .11$, $p < .001$).

Study 3 was conducted among 275 respondents who were students at the University of Texas at Arlington who self-identified as white ($N = 199$) or black ($N = 76$). This study controlled for both number of friends from the secondary group and tendency for socially desirable responding. Results revealed support for the STE and ruled out two alternative explanations for the STE (Tausch et al., 2010).

These cross-sectional studies were followed up by a fourth study. Unlike the other studies, Study 4 was a longitudinal study. Study 4 examined the STE and its underlying mediating processes, again in the context of contact in Northern Ireland, this time using participants from Belfast ($N = 411$). Of the overall sample, 185 were Catholics and 226 were Protestants. This final, longitudinal study used a two-wave design to examine the STE. Study 4 tested for the STE and the mediating roles of primary outgroup attitudes (attitude generalisation) and ingroup attitude (to test the idea that a STE can occur via deprovincialisation, whereby the respondent develops a less glorified view of the ingroup). By means of a multiple regression analysis in which the indirect effects of the predictor variable by means of the proposed mediators were tested concurrently, Study 4 found longitudinal support for the STE (Tausch et al., 2010).

These studies have gone a long way towards establishing the secondary transfer effect as a real effect, removing the prospect that it is simply an artefact of generalised outgroup contact, social desirability, or selection bias. Pettigrew (1997) proposed three probable processes that mediate the generalisation of contact effects from one outgroup towards other outgroups, i.e., attitude generalisation and deprovincialisation (described above), and empathy generalisation. Attitude generalisation is the only process addressed in the present research, but the other two proposed potential mediators are discussed in more detail in Chapter four.

Summary

The literature review above has reviewed contact theory, along with the dimensions of contact, namely friendships, with a specific focus on the Fast-Friends paradigm. It has intended to establish both self-disclosure and intergroup anxiety as mediators for more positive outgroup attitudes, cross-group friendships and ultimately reduced prejudice. The importance of trust was also established. Of special relevance to the present study, contact effects have been revealed to generalise well beyond the outgroup encountered in the original contact situation. Specifically, positive intergroup contact experiences can influence attitudes not only towards encountered (primary) outgroups, but also towards other (secondary) outgroups that were not originally involved in the intergroup encounter.

The reduction of prejudice and the enhancement of intergroup relations remains an imperative objective in societies that are becoming more diverse, as is the circumstance in South Africa. By means of intergroup contact, attitudes can be improved, and prejudice can be lessened. This can be enabled by reciprocal self-disclosure and empathy. Additionally, this contact can have a secondary transfer effect (STE), that is, the generalisation of contact effects from a primary encountered outgroup to attitudes towards secondary outgroups that are not directly involved in the contact (Pettigrew, 2009).

The next section presents a laboratory experiment conducted over 3 weeks (with pre-test, immediate post-test, and delayed post-test measures of outgroup attitudes) to test secondary transfer of white South African students' attitudes at Stellenbosch University. It intended to explore how contact effects generalise to primary as well as secondary outgroups. The study's methodology, participants and results are discussed in more detail in the subsequent chapter. This research intended not only to contribute to the developing literature on the secondary transfer effect, but to also produce outcomes that might help Stellenbosch

University in the development of interventions and procedures aimed at encouraging positive intergroup relations at the University.

CHAPTER THREE

An Experimental Study of the Secondary Transfer Effect

The present study sought to understand whether intergroup contact effects generalise to the whole group involved and even to outgroups not involved in the original contact condition. Specifically, the present study explored the degree to which positive intergroup contact with a black (African) South African confederate predicted positive attitudes towards not only black (African) South Africans in general (the primary outgroup), but also towards Indian South Africans in general (a secondary outgroup), i.e., the secondary transfer effect (STE) of intergroup contact. A two (Condition: Direct Contact vs Control) x three (Time: Time 1 vs Time 2 vs Time 3) experimental study amongst white female South African students at Stellenbosch University was undertaken. The results presented below exclude any data from the extended contact condition (which falls beyond the scope of this thesis; see Berry, 2020). The detailed methodology is described in more detail below (see also Appendix A).

Hypotheses

A series of theory-driven hypotheses were developed for the present study. For each hypothesis, contact with black (African) and Indian South Africans measured at Time 1 were included as control variables.

Attitudes

Hypothesis 1: Experimentally manipulated intergroup contact with the black (African) South African confederate will be significantly associated with more positive attitudes towards black (African) South Africans at Time 2 (relative to Time 1 baseline), and that this positive change in attitudes will remain visible at Time 3 (i.e., that attitudes towards black (African) South Africans at Time 3 will be significantly more positive than those reported at Time 1).

Hypothesis 2: Attitudes towards black (African) South Africans at Time 2 (subsequent to experiencing experimentally manipulated intergroup contact with the black (African) South African confederate) will be significantly positively associated with attitudes towards Indian South Africans at Time 2 (controlling for positive attitudes towards Indian South Africans at Time 1).

Trust

Hypothesis 3: Experimentally manipulated intergroup contact with the black (African) South African confederate will be significantly associated with more trust towards black (African) South Africans at Time 2 (relative to Time 1 baseline), and that this positive change in trust will remain visible at Time 3 (i.e., that trust towards black (African) South Africans at Time 3 will be significantly greater than that reported at Time 1).

Hypothesis 4: Trust towards black (African) South Africans at Time 2 (subsequent to experiencing experimentally manipulated intergroup contact with the black (African) South African confederate) will be significantly positively associated with trust towards Indian South Africans at Time 2 (controlling for trust towards Indian South Africans at Time 1).

Method

As previously mentioned, the present study formed part of a larger study. The present study focused on the STE of direct contact element of the larger study while Berry (2020) focused the STE of extended contact element of the larger study. To better contextualise the focus of the present study, a description of the methods of the larger study is provided below.

Participants

In the larger study white South African female friendship pairs were recruited (i.e., white female students who were already friends with one another) using a class announcement made in an undergraduate Psychology module. Once recruited, the friendship pair was asked to schedule a date and time for participation, and they were then randomly assigned to either the experimental condition (direct or extended contact) or the control condition (no contact). The data collection methodology employed by Openshaw (2015) was followed as closely as possible in this replication study.

All participants completed surveys measuring their baseline measures of intergroup contact with (and attitudes and trust towards) black (African) and Indian South Africans in general (see a more detailed description of the data collection protocol below), before being randomly allocated to one of three conditions: direct contact with a female black (African) South African confederate, extended contact with a female black (African) South African confederate, or a control (no contact) condition. I will only describe the procedure and results

related to those participants assigned to the direct contact condition and those assigned to the control condition (for results relating to those participants in the extended contact condition relative to the control condition see Berry, 2020).

Twenty-five female participants (from 25 friendship pairs; M_{age} = 19.32, *SD* = 0.99) were randomly assigned to the direct contact condition (their friend in the friendship pair was then assigned to the extended contact condition; see Berry, 2020). Seven of these 25 students indicated English as their first- (home) language and 18 students indicated Afrikaans as their first- (home) language.

Twelve female participants (i.e., both friends from each of six friendship pairs; M_{age} = 20.50, *SD* = 1.62) were randomly assigned to the control (no contact) condition. Eight of these students indicated English as their first- (home) language, three students indicated Afrikaans as their first- (home) language, and one student indicated that they were bilingual in English and Afrikaans as their first- (home) language.

Procedure

Data-collection took place in the second semester of the 2019 academic year at Stellenbosch University. Consent was received from both the Research Ethics Committee (Humanities; REC-2019-8840), as well as the Registrar of Stellenbosch University, prior to the recruitment of research participants. White South African students were recruited (in friendship pairs) by means of a class announcement (Appendix B). Prospective female participants met with the researcher in their friendship pairs, where the study was discussed in more detail.

The broad aim and objective of the study was described to prospective participants in their friendship pairs, along with their rights as research participants (including the right to anonymity, confidentiality, and opportunity to withdraw participation). Friends in their friendship pairs who decided to participate in the study then provided their written consent (Appendix C). Upon providing informed consent each participant completed the first (Time 1 baseline) survey of the study (Appendix D). Time 2 of the study (experimental (versus no contact) manipulation of contact for participants in the direct contact condition) was scheduled for exactly seven days after the completion of the survey at Time 1. The procedures at Time 2 were as follows:

Contact condition.

Step 1: Participants were received upon arrival at the front entrance to the Wilcocks Building (Psychology Department), Stellenbosch University.

Step 2: Participants in the contact experimental condition were introduced to the female black (African) South African confederate.

Step 3: Both the participant and black (African) South African confederate were then informed of the Closeness Induction Task activity they would be partaking in.

Step 4: They were each asked to complete the measure of State Anxiety (Appendix E).

Step 5: The Closeness Induction Task (see Appendix F) was described to the direct contact participant and the black (African) South African confederate. The Closeness Induction Task comprised three lists of questions that the participant and the confederate needed to ask one another that would allow the two participants to get to know one another better. The questions became less superficial and more intimate as the task proceeded from list one to list two and list three. The participant and confederate had one minute to engage with one another using the questions from list one, three minutes to engage with the questions on list two, and five minutes to engage with the questions on list three. I left the room where the task was taking place and would only enter the room periodically to instruct the participants to move on to the next list of questions once the time for each list had elapsed.

Step 6: Upon the completion of the experimental task, participants once again completed a measure of their State Anxiety (Appendix E).

Step 7: Immediately following this, participants then completed the second (Time 2) survey (Appendix G).

Step 8: Finally, after the completion of the second online survey, both participants were debriefed. The control participant was debriefed about the fact that their friend (who was assigned to the extended contact condition) had observed their interaction with the black (African) confederate remotely (see Berry, 2020, for a detailed explanation relating to the extended contact condition) and why it was necessary to hide this information.

Control condition.

Step 1: Participants were greeted upon arrival in their friendship pairs at the front entrance to the Wilcocks Building (Department of Psychology), Stellenbosch University.

Step 2: Participants were directed to the selected room where they participated in an activity where they guessed one another's preferences to a variety of superficial things (e.g., colour, food, movie). None of the answers provided during this activity were recorded.

Step 3: Participants then completed the second (Time 2) survey (Appendix G).

Step 4: After the conclusion of the second survey, participants were thanked and directed out of the building.

One week after the completion of the second survey participants completed the third and final (Time 3) survey (Appendix H). Upon completion of this final survey participants were fully debriefed on each element of the study and data collection protocol, including all the deceptions employed over the course of the study. Participants were given an opportunity to ask questions and to indicate whether they would like to withdraw their data from the study. Participants excluded from the study each still received a R20 voucher. No participants chose to withdraw.

Materials

For the sake of transparency all the survey questions are described below for the direct contact condition, but not all the measures formed part of the hypothesis relevant to the portion of the study which I analysed for this thesis (for example the anxiety measures, the category salience measures). There were three main surveys completed by participants in the present study, each of which are described in further detail below. All the items used in the present study were taken directly from Openshaw (2015) in order that the present study could attempt to replicate her findings. The main surveys included a survey measuring baseline contact with and attitudes towards black (African) South Africans and Indian South Africans in general (Time 1 survey; Appendix D), a post-experimental follow-up survey of contact with and attitudes towards these two outgroups completed immediately after the experimental manipulation of contact (direct versus control conditions; Time 2 survey; Appendix G), and a final follow-up survey measuring contact with and attitudes towards these two outgroups one

week after the experimental manipulation of contact (Time 3; Appendix H). Each participant's surveys were matched over time by having participants create a unique identifier (code) to put on their surveys, comprising a combination of their day of birth and the final four digits of their student number.

Time 1 (baseline) survey.

The first survey (Appendix D) completed by participants included their demographic information (e.g., age, home language, ethnicity) and information about the nature and quality of the friendship they have with the friend who is joining them in the friendship pair in this study (adapted from Openshaw, 2015), including the type of friendship they have (scored as acquaintance, friends, close friends, or romantic partner), the length of their friendship in years and months, and the perceived friendship 'closeness' they enjoy (measured using a series of pairs of circles that progressively overlap more and more with one another). This primary focus of this survey, however, related to measures of contact with and attitude towards black (African) South Africans and Indian South Africans in general. These measures are described in more detail below. Unless specified, each construct below was asked separately in relation to each of the two outgroups under consideration, black (African) South Africans and Indian South Africans.

Cross-group friendships. A single item asked participants "*How many of your friends at Stellenbosch University are* [black (African) South Africans / Indian South Africans]" (scaled from 0 = *None* to 6 = *All*).

Quantity of contact with cross-group friends. Across three items (scaled from 0 = *Never* to 6 = *Daily*) participants were asked how often they spent time with their [outgroup] friend(s).

Extended contact. Across two items participants were asked "*How many of your close white South African friends have friends who are* [black (African) South Africans / Indian South Africans]" and "*How many of your family members have friends who are* [black (African) South Africans / Indian South Africans]" (each scaled from 0 = *None* to 6 = *All*).

Quantity of general contact with each outgroup at Stellenbosch University. A single item asked participants "*How frequently do you have direct, face-to-face interactions with* [black (African) South African / Indian South African] *students at Stellenbosch University?*" (scaled from 0 = *None* to 6 = *Daily*).

Quality of contact with each outgroup at Stellenbosch University. Two items asked participants "*How pleasant or unpleasant would you rate your direct, face-to-face interactions with* [black (African) South African / Indian South African] *students at Stellenbosch University*?" (scaled from 1 = *Very unpleasant* to 5 = *Very pleasant*), and "*How positive or negative would you rate your direct, face-to-face interactions with* [black (African) South African / Indian South African] *students at Stellenbosch University*?" (scaled from 1 = *Very positive* to 5 = *Very negative*).

Outgroup attitudes. A feeling thermometer was used to measure attitudes towards black (African) and Indian South Africans in general on a scale from 0 (*cold/negative*/*unfavourable*) to 100 (*warm/positive/favourable*).

Outgroup trust. Three items measured trust towards each of the two outgroups. Participants were asked to indicate their agreement or disagreement with each of three statements (e.g., "*I cannot trust* [black (African) / Indian South Africans]" (scaled from 1 = *Strongly disagree* to 7 = *Strongly agree*).

Attitude strength. A single item asked participants to rate the extent of their certainty over the opinions towards each of the two outgroups (scaled from 1 = *Extremely uncertain* to 6 = *Extremely certain*). Each construct in the main survey described above was scored so that higher scores reflected more cross-group friendships, greater quantity and quality of contact, more positive outgroup attitudes, more outgroup trust, and greater attitude strength.

Time 2 measures.

Pre- and post-task anxiety.

All participants in the experimental (in the case of the present study, the direct contact) condition completed a six-item measure of their state anxiety (measuring the extent to which they were feeling *threatened, anxious, comfortable, awkward, safe* and *at ease*; scaled from 1 = *Not at all* to 7 = *Extremely*). Items were scored so that higher scores indicated greater anxiety relative to lower scores.

Post-task survey.

All participants completed measures of outgroup attitudes and outgroup trust towards black (African) South Africans and Indian South Africans upon the completion of their respective (direct contact versus control) tasks. The measures of outgroup attitudes and

outgroup trust used in this post-task survey at Time 2 were identical to those used in the baseline survey at Time 1 (see Appendix G). Additionally, for participants in the direct contact condition, the post-task survey included items that measured the success of the closeness induction task and their attitudes towards the black (African) South African confederate they had interacted with.

Task success. A single item asked participants in the direct contact condition to indicate the extent of their agreement with the statement "*The conversation they just had in the task is a good way to get to know somebody*" (scaled from 1 = *Completely disagree* to 5 = *Completely agree*).

Reciprocal self-disclosure. This was measured using a single item that asked participants in the direct contact condition "*When you think about the conversation you just had as a whole (and the information that you shared and that the other participant shared), to what extent do you think the conversation you just had was of a personal/private nature*?" (scaled from 1 = *Not at all personal/private* to 5 = *Extremely personal/private*).

Category salience. A three-item measure was used to determine the extent to which the group membership of the participant and the confederate was salient during the completion of the closeness induction task. For example, participants in the direct contact condition were asked "*To what extent did you feel as if you were acting/behaving as a typical member of the white South African community during the conversation*?" (scaled from 1 = *Not at all* to 5 = *Completely*).

Attitude towards the confederate. A single-item feeling thermometer (identical to that used to measure group-level attitudes) was used to measure that attitude held by the participant in the direct contact condition towards the black (African) South African confederate they had completed the task with. Participants were asked to rate their feeling towards the confederate on a scale from 0 (*Cold/negative/unfavourable*) to 100 (*Warm/positive/favourable*). All items relating to the experimental task were scored to reflect greater task success, greater self-disclosure, greater category salience, and more positive attitudes towards the confederate.

Time 3 measures.

One week after the completion of the experimental (contact vs control) manipulation (and the subsequent completion of the main survey at Time 2), all participants completed measures of attitudes and trust towards black (African) South Africans and Indian South

Africans using identical measures as measured at Time 1 and Time 2 (see Appendix H). The means, standard deviations, and reliability estimates for each construct at each time point are summarised for the direct contact and control conditions in Table 1 below.

Results

Friendship pairs were randomly assigned to either the experimental or the control condition after finalising the first survey. Members of the friendship pairs allocated to the experimental condition were randomly assigned to either the direct contact condition (engaging in the closeness induction task with the black (African) South African confederate) or the extended contact condition (observing the closeness induction task). This thesis only reports the results from participants in the control and direct contact conditions.

Preliminary Data Analyses

After all the data was collected a preliminary data analysis was done. Preliminary data analyses were conducted using the Statistical Package for the Social Sciences (SPSS). An exploratory factor analysis (EFA) was conducted on each multi-item construct and reliability of multi-item constructs with at least three items was assessed using Cronbach's alpha, which indicated acceptable reliability (the cut-off value being .70) for all constructs at all time points (as adopted by Openshaw, 2015). For constructs with only two items, correlations were computed, which were also all significant and deemed adequate (see Table 1).

The distribution of scores for each of the key variables concerning the hypotheses under examination was computed for participants in each condition. The satisfactory ranges for skewness (-2.00 to +2.00) and kurtosis (-7.00 to +7.00) suggested by West, Finch, and Curran (1995) were used to measure the normality of distribution of the mean scores in each condition. These analyses established that the mean scores were satisfactorily normally dispersed in both the control condition ($M_{Skewness}$ = -0.64, $SD_{Skewness}$ = 0.75, $Min_{Skewness}$ = -2.01, $Max_{Skewness}$ = 0.82; $M_{Kurtosis}$ = 0.36, $SD_{Kurtosis}$ = 1.65, $Min_{Kurtosis}$ = -1.61, $Max_{Kurtosis}$ = 4.80) and the direct contact condition ($M_{Skewness}$ = -0.43, $SD_{Skewness}$ = 0.64, $Min_{Skewness}$ = -1.35, $Max_{Skewness}$ = 1.01; $M_{Kurtosis}$ = -0.15, $SD_{Kurtosis}$ = 1.17, $Min_{Kurtosis}$ = -1.64, $Max_{Kurtosis}$ = 2.15) to permit the parametric analyses that followed.

Table 1: *The Means, Standard Deviations (SD), and Reliability Estimates for Each of the Main Variables.*

Condition	Variable	Mean (SD)	Reliability/Correlation
Control (N = 12)	*T1 Direct Contact with black (African) South Africans*	2.04 (1.50)	.87***†
	T1 Direct Contact with Indian South Africans	0.83 (1.09)	.84**†
	T1 Contact Quality with Indian South Africans	3.95 (0.76)	.54[a]†
	T1 Attitudes towards black (African) South Africans	62.08 (21.26)	-
	T1 Attitudes towards Indian South Africans	69.17 (13.46)	-
	T1 Trust towards black (African) South Africans	4.69 (1.55)	.92
	T1 Trust towards Indian South Africans	5.58 (1.23)	.87
	T2 Attitudes towards black (African) South Africans	65.67 (19.78)	-
	T2 Attitudes towards Indian South Africans	69.83 (16.81)	-
	T2 Trust towards black (African) South Africans	4.83 (1.36)	.86
	T2 Trust towards Indian South Africans	5.36 (1.08)	.84
	T3 Attitudes towards black (African) South Africans	68.50 (15.71)	-
	T3 Attitudes towards Indian South Africans	72.75 (10.79)	-
	T3 Trust towards black (African) South Africans	4.75 (1.09)	.84
	T3 Trust towards Indian South Africans	5.11 (1.01)	.82
Direct Contact (N = 25)	*T1 Direct Contact with black (African) South Africans*	1.62 (1.51)	.72**†
	T1 Direct Contact with Indian South Africans	1.08 (1.43)	.61*†
	T1 Contact Quality with Indian South Africans	3.87 (0.81)	.77***†
	T1 Attitudes towards black (African) South Africans	62.08 (15.49)	-
	T1 Attitudes towards Indian South Africans	67.64 (12.51)	-
	T1 Trust towards black (African) South Africans	3.84 (1.29)	.85
	T1 Trust towards Indian South Africans	4.74 (1.39)	.88
	T2 Attitudes towards black (African) South Africans	67.48 (19.73)	-
	T2 Attitudes towards Indian South Africans	73.32 (12.64)	-
	T2 Trust towards black (African) South Africans	5.05 (1.37)	.87
	T2 Trust towards Indian South Africans	5.69 (1.01)	.91
	T3 Attitudes towards black (African) South Africans	69.76 (21.72)	-
	T3 Attitudes towards Indian South Africans	75.28 (12.93)	-
	T3 Trust towards black (African) South Africans	5.07 (1.64)	.92
	T3 Trust towards Indian South Africans	5.67 (1.07)	.93

Note: All measures of contact reported here are anchored at 1 and 5; single-item attitude measure is anchored at 0 and 100; Trust measure is anchored at 1 and 7. Higher scores indicate greater contact quantity and quality, more positive outgroup attitudes, and greater outgroup trust.
† Pearson's *r* for two-item measures; * $p < .05$ ** $p < .01$ *** $p < .001$ [a] $p = .09$.

A multivariate analysis of variance (MANOVA) was run to compare participants allocated to the control and the direct contact conditions on the variables measured at time one. These included the biographic and demographic variables (age, home language, and years of education at Stellenbosch University) and the main variables concerning the key hypotheses of this research (direct contact with black (African) and Indian South Africans, and measures of positive attitudes and trust towards black (African) and Indian South Africans). Results showed that there were no overall multivariate differences across the two conditions, Pillai's Trace = .42, $F(10, 22) = 1.60$, $p = .17$, $\eta_{partial} = .42$. An inspection of the univariate statistics showed that participants in the control condition were significantly older ($M = 20.55$, $SD = 1.70$) than participants in the direct contact condition ($M = 19.41$, $SD = 1.01$; $F(1,33) = 5.87$, $p = .02$), and that participants in control condition had been at university longer ($M = 3.00$, $SD = 1.41$) than participants in the direct contact condition ($M = 1.95$, $SD = 0.90$; $F(1,33) = 6.72$, $p = .01$). Nevertheless, there were no substantial univariate differences among participants in these two conditions on any of the main variables concerning the hypotheses under examination (all p's > .09).

Finally, a one-sample *t*-test was undertaken to explore whether participants in the direct contact condition experienced the experimental manipulation of relational closeness as an effective technique to get to know somebody, and whether the experimental manipulation effectively promoted a positive attitude towards the black (African) South African confederate. These analyses confirm that that mean score for task success (M =4.18, SD = .38) deviated significantly from the scale mid-point (which was 3; $t(18) = 13.57$, $p < .001$), and that the mean attitude score towards the black (African) South African confederate ($M = 88.84$, $SD = 9.12$) deviated significantly from the scale mid-point (which was 50; $t(18) = 18.57$, $p < .001$). These findings suggest that participants in the direct contact condition considered the closeness induction task to be an effective means of getting to know somebody, and that the closeness-induction task led to significantly positive attitudes towards the confederate.

Main Analyses

A key objective of the present study was to replicate the experimental design employed by Openshaw (2015) and to overcome the lack of power reported by Openshaw (2015) by ensuring a sufficiently large sample size. However, the time and resource demands of recruiting enough participants for the present study became prohibitive. Given the small sample size and

the bias that interdependencies introduce to the analyses, a significance level of $p = .10$ was set for evaluating the significance of the intraclass correlations (see Judd, McLelland, & Ryan, 2009).

Attitudes towards black (African) South Africans.

I ran a 2 (Condition: Direct vs Control) x 3 (Time: Time 1 vs Time 2 vs Time 3) mixed model analysis of variance (ANOVA), with repeated measures on the second factor, using a Bonferroni correction. This analysis did not yield a significant main effect for Time (Pillai's Trace = .12, $F(2, 33) = 2.27$, $p = .12$, $\eta_{partial} = .12$. The Time X Condition interaction effect was also non-significant (Pillai's Trace = .00, $F(2, 33) = 0.03$, $p = .97$, $\eta_{partial} = .00$).

A decomposition of this interaction effect showed that there were no significant differences in attitude scores towards black (African) South Africans across the two conditions at any of the three measurement points (all p's > .60). Moreover, although both conditions exhibited an increase in positive attitudes towards black (African) South Africans over time, these increases were non-significant between Time 1 and Time 2, Time 2 and Time 3, and between Time 1 and Time 3 across both conditions (all p's > .29). A comparison of the mean attitude scores towards black (African) South Africans across the two conditions over three time points is illustrated in Figure 1 below.

Trust towards black (African) South Africans

I next tested whether the experimental manipulation had any effect on the measures of trust towards black (African) South Africans. I again computed a 2 (Condition: Direct vs Control) x 3 (Time: Time 1 vs Time 2 vs Time 3) mixed model ANOVA, with repeated measures on the second factor, using a Bonferroni correction. This analysis yielded a significant main effect for Time (Pillai's Trace = .20, $F(2, 32) = 3.99$, $p = .03$, $\eta_{partial} = .20$. The Time X Condition interaction effect was non-significant (Pillai's Trace = .10, $F(2, 32) = 1.70$, $p = .20$, $\eta_{partial} = .10$). The main effect for Time shows that, collapsing across the two experimental conditions, trust scores at Time 2 ($M = 5.02$, SD = 1.36) were significantly greater than trust scores at Time 1 ($M = 4.13$, SD = 1.42, $p = .048$), while trust scores at Time 3 ($M = 4.98$, SD = 1.49) were statistically comparable to trust scores at Time 1 and Time 2 (p's > .08). The partial eta-squared associated with the significant main effect for Time is large,

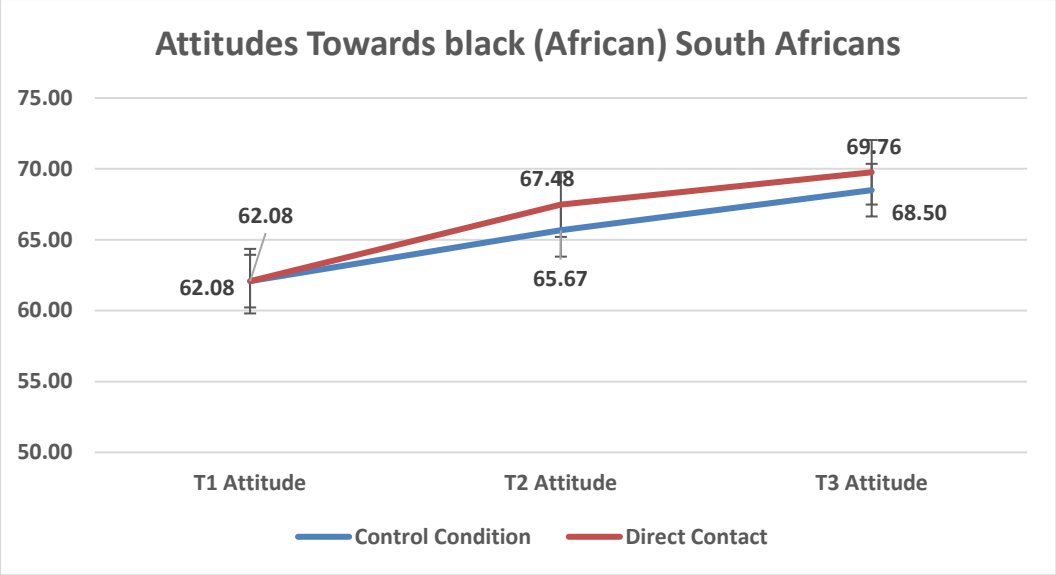

Figure 1. Mean outgroup attitude scores of participants in the direct and no contact (control) conditions at Time 1 (baseline). Time 2 (post-task), and Time 3 (1-week post-task).

given that reducing the sample size by running a fully-within subjects ANOVA leads to a reduction in power. I therefore chose to decompose the TimeXCondition interaction effect to see if there were any effects that may have been missed due to the reduced sample size. A decomposition of the TimeXCondition interaction showed that for participants in the direct contact condition there was a significant improvement in trust from Time 1 (M = 3.84, SD = 1.29) to Time 2 (M = 5.11, SD = 1.36, p = .003, Cohen's d = .82). Participants in the direct contact condition did not experience a significant decrease in trust scores from Time 2 to Time 3 (M = 5.10, SD = 1.66, p = 1.00). A comparison of the mean trust scores towards black (African) South Africans across the two conditions over three time points is illustrated in Figure 2 below.

Testing the Secondary Transfer Effect

A bootstrapped (5,000 resamples) linear regression analysis was run to test whether changes in attitudes towards black (African) South Africans between Time 1 and Time 2 predicted more positive attitudes towards Indian South Africans in general. Due to the small overall sample size (N = 25), I decided to test the less strict secondary transfer effect between change in Time 1 – Time 2 attitudes/trust towards black (African) South Africans and attitudes/trust

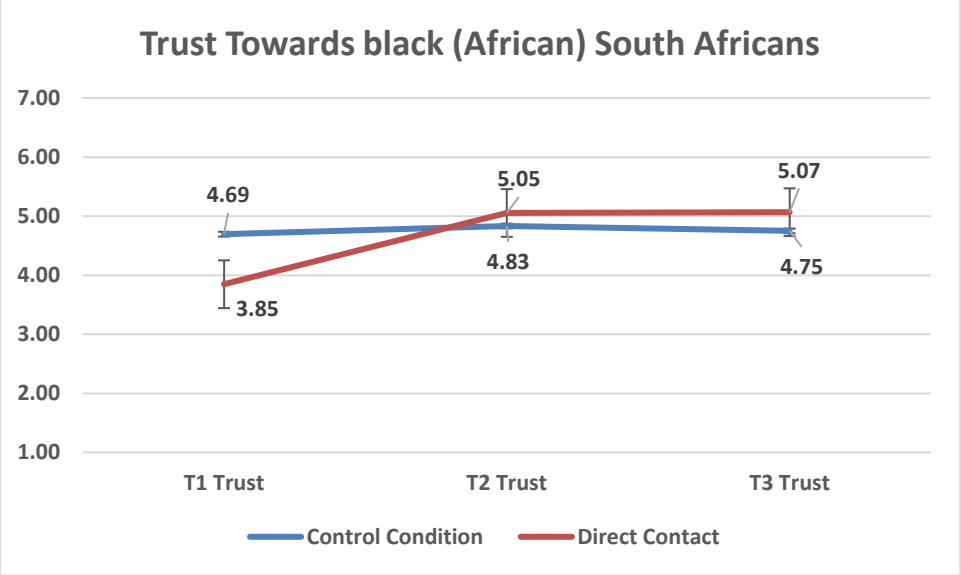

Figure 2. Mean outgroup trust scores of participants in the direct and no contact (control) conditions at Time 1 (baseline). Time 2 (post-task), and Time 3 (1-week post-task).

towards Indian South Africans at Time 2 (and not Time 3, which would provide a more stringent delayed post-test test of STE). Quantity and quality of contact with Indian South Africans reported at Time 1 and attitudes towards Indian South Africans at Time 1 were included as control variables.

A positive change in attitudes towards black (African) South Africans in general from Time 1 to Time 2 significantly predicted more positive attitudes towards Indian South Africans in general at Time 2 (B = .52, p =.015, 95%CI: .06, .53), controlling for prior contact with, and attitudes towards, Indian South Africans. This model explained 33% of the variance in attitudes towards Indian South Africans at Time 2.

A similar bootstrapped (5,000 resamples) linear regression analysis was run to test whether changes in trust towards black (African) South Africans between Time 1 and Time 2 predicted more trust towards Indian South Africans in general. Quantity and quality of contact with Indian South Africans reported at Time 1 and trust towards Indian South Africans at Time 1 were included as control variables in this analysis. A positive change in trust towards black (African) South Africans in general from Time 1 to Time 2 significantly predicted more trust towards Indian South Africans in general at Time 2 (B = .66, p =.002, 95%CI: .17, 60), controlling for prior contact with, and trust towards, Indian South Africans. This model explained 56% of the variance in trust towards Indian South Africans at Time 2 (see Figure 3).

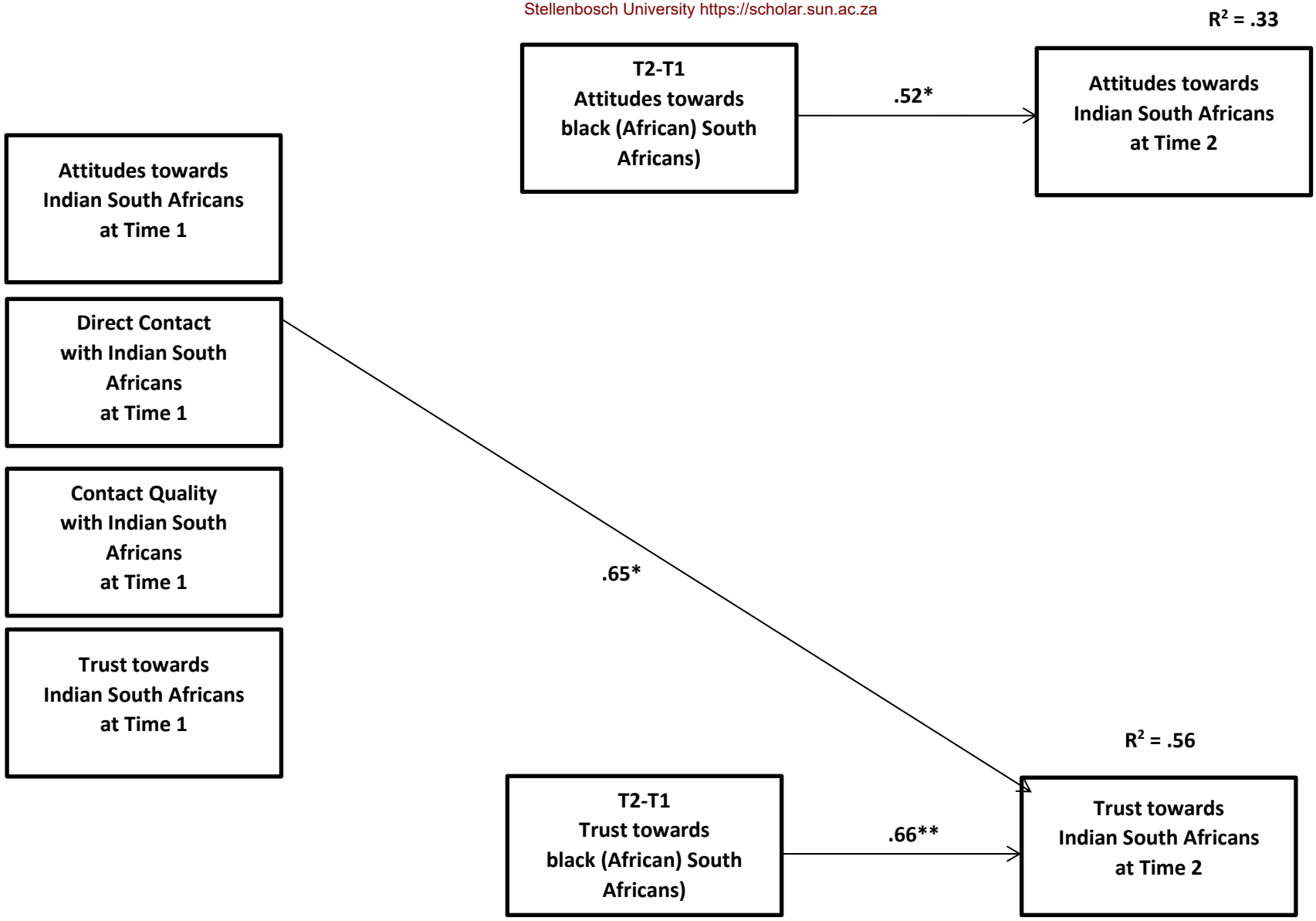

Figure 3 Multiple regression model illustrating the secondary transfer effect of no contact versus direct contact with a black (African) South African (primary outgroup member) and attitudes as well as trust towards Indian South Africans (secondary outgroup) amongst white South Africans (N = 37).

Summary

The present study used an experimental design (where intergroup contact was manipulated) to investigate whether positive direct contact with a black (African) South African confederate would promote positive attitudes and trust towards black (African) South Africans and whether such benefits might generalise to positive attitudes and trust towards Indian South Africans. Although the obtained sample was smaller than intended, due to factors beyond my control, the results of the study are quite encouraging. Ratings of the quality of the interaction in the direct contact condition indicate that the study successfully manipulated positive contact with the black (African) South African member of the primary outgroup. Initial analyses showed Hypothesis 1 was not supported; positive contact with the black (African) South African confederate had no significant impact on outgroup attitudes towards black (African) South Africans in general relative to the baseline attitude score at Time 1. However, in support of Hypothesis 3, positive direct contact with the confederate did lead to significantly greater outgroup trust towards black (African) South Africans at Time 2 (relative to the baseline score Time 1). This significant increase in trust was maintained one week after the experimental manipulation of contact. Subsequent multiple regression analyses revealed that contact with the primary outgroup generalised to positive attitudes and trust toward the secondary outgroup, Indian South Africans, thus supporting Hypothesis 2 and Hypothesis 4 and confirming the secondary transfer effect. These findings are discussed in further detail in the following chapter.

CHAPTER FOUR

Discussion

The research literature has established that positive intergroup contact is reliably associated with lower prejudice towards those outgroup members who are encountered in the contact setting (and the groups that they belong to; Pettigrew & Tropp, 2006). This benefit of intergroup contact has also been observed in the South African context (e.g., Swart et al., 2010, 2011). The present study investigated the broader generalisation of the positive effect of intergroup contact across outgroups, a phenomenon known as the secondary transfer effect (STE; Pettigrew, 2009) of contact among a sample of white South African students studying at Stellenbosch University.

The present study employed an experimental design to manipulate positive direct contact with a black (African) South African confederate to, first, determine whether such experimentally manipulated contact might promote more positive attitudes (Hypothesis 1) and more trust (Hypothesis 3) towards black (African) South Africans in general and, second, to explore whether attitudes (Hypothesis 2) and trust (Hypothesis 4) towards black (African) South Africans would generalise to include more positive attitudes and trust towards Indian South Africans. Although the experimental manipulation of contact failed to significantly improve attitudes towards black (African) South Africans (relative to the baseline measure), the change in attitudes towards black (African) South Africans from Time 1 to Time 2 (though non-significant) did significantly predict more positive attitudes towards Indian South Africans at Time 2 (controlling for attitudes towards Indian South Africans at Time 1). With respect to trust, the experimentally manipulated contact significantly improved trust towards black (African) South Africans (relative to the baseline), and the change in trust towards black (African) South Africans from Time 1 to Time 2 significantly predicted more trust towards Indian South Africans at Time 2 (controlling for trust towards Indian South Africans at Time 1). As such, in spite of the fact that the present study might have been somewhat underpowered, it nevertheless yielded results supportive of the STE of contact (in terms of attitude and trust generalisation from one outgroup to another) in the South African context. These findings are discussed in further detail below. This is followed by a consideration of the limitations of the present study along with suggestions of new avenues of research on the STE.

Improving Outgroup Attitudes and Outgroup Trust

The present study showed that participants in the direct contact condition exhibited a consistent (yet non-significant) improvement in their attitudes towards black (African) South Africans over time. Of course, it is important to note that these changes over time among participants in the direct contact condition were not statistically significant and, while they were greater than the changes observed over time among participants in the control (no contact condition), the attitudes towards black (African) South Africans over time did not differ significantly across the two conditions at any of the three time points.

Nevertheless, despite these non-significant effects, the pattern of results relating to outgroup attitudes were in line with the original predictions made by Allport (1954) that positive intergroup contact does prejudice (promoting more positive attitudes) and are in the anticipated direction suggested by the meta-analysis undertaken by Pettigrew and Tropp (2006). Moreover, these experimental findings are consistent with correlational findings from the South African literature that have shown that positive intergroup contact with black (African) South Africans promotes more positive attitudes towards this target group among white South Africans (e.g., Openshaw, 2015; Swart et al., 2010). It should be noted, however, that Openshaw (2015), using an identical experimental design and using the same set of measures as used in the present study, found that participants in the direct contact condition experienced a significant improvement in attitudes towards black (African) South Africans subsequent to the closeness induction task. The contrast between Openshaw's (2015) significant findings and my non-significant findings perhaps speaks to the challenge of replicability in psychological science. Clearly further research using experimentally manipulated contact is needed using designs that are sufficiently powered to detect significant changes.

In contrast to the non-significant changes in outgroup attitudes over time that were observed in the present study, participants experiencing direct contact with the black (African) confederate showed a significant improvement in outgroup trust towards black (African) South Africans relative to their trust scores one week earlier. Moreover, this significant gain in trust remained evident one week after the intergroup encounter. This pattern of results is also different to those observed by Openshaw (2015). Although she observed a significant improvement in trust after a single intergroup encounter, this improvement was not maintained one week after the encounter. This prompted her to speculate that trust might be more difficult to establish and maintain over time than positive outgroup attitudes. In contrast, the findings

of the present study suggest that improvements in outgroup trust might be possible after a single intergroup encounter and can be maintained over time. The findings of the present study are consistent with those reported by Openshaw (2015) insofar as they suggest that outgroup attitudes and outgroup trust may be distinct from one another. In both studies the pattern of results for outgroup attitudes and outgroup trust are distinct from one another.

One of the mechanisms through which participants in the direct contact condition may have experienced an increase in trust towards black (African) South Africans is that of reciprocal self-disclosure. The closeness induction task used in the direct contact condition, where the participant and the confederate could ask one another questions to get to know each other better, is designed to promote reciprocal self-disclosure. Self-disclosure is recognised in the contact literature as an essential ingredient for the promotion of intergroup trust (Swart, Hewstone, Turner, & Voci, 2011b; Turner, Hewstone, Swart, Tam, Myers, & Tausch, 2010). This is because the act of self-disclosure makes the person disclosing personal information vulnerable to the intentions of the receiver. When that vulnerability is respected within the context of a safe encounter (as created by the closeness induction task), it can promote greater trust towards the receiver (and their group, in the context of an intergroup encounter). Moreover, self-disclosure allows the receiver to see the world through the eyes of the person disclosing the information and this can promote greater empathy and perspective-taking between members of different groups (Swart et al., 2011b).

In the study undertaken by Openshaw (2015) the significant improvement in trust at Time 2 (one week after Time 1) was not maintained all the way through to Time 3 (one week later after Time 2). In the present study, although trust scores improved significantly from Time 1 to Time 2, they did not show any additional improvement from Time 2 to Time 3. Together, these results suggest that intergroup trust requires multiple experiences of trustworthy encounters in order to enhance intergroup trust over time. Interventions aimed at improving intergroup trust should therefore focus on creating multiple opportunities in which trust can be earned by the participants of the intervention.

The findings of the present study as they relate to trust in the South African context are particularly encouraging. As a post-conflict society, South African intergroup relations require the promotion of intergroup trust among South Africans from different groups (see Swart et al., 2011b). The present study suggests that creating opportunities for positive intergroup encounters that encourage reciprocal self-disclosure within a safe context might offer an avenue for promoting intergroup trust. The collaborative nature of academia in schools and

universities may mean that these educational contexts are ideal for such trust-building interventions. Unfortunately, however, the intergroup distrust that prevails in post-conflict societies (including in South Africa; IJR, 2013) may discourage people from different groups from taking up opportunities for intergroup contact. Contact avoidance may therefore be one of the key barriers towards promoting intergroup trust in post-conflict societies. As such, it is important that institutions like universities and schools actively create positive contact experiences between young South Africans that can facilitate cooperation, self-disclosure, and trust.

The Secondary Transfer Effect: The Generalisation of Attitudes and Trust

The generalisation of the benefits of intergroup contact (in terms of promoting more positive outgroup attitudes) across outgroups (even those not involved in the contact setting) is one of the most exciting ideas to emerge from the contact literature in the past decade (see Lolliot et al., 2013; Pettigrew, 2009). This so-called secondary transfer of positive contact effects (or secondary transfer effect; STE) has received robust support in the contact literature. The findings of the present study support those previously observed in the emerging South African literature on the STE (e.g., Daiber, 2017; De Beer, 2015; Nell, 2017; Openshaw, 2015).

In the present study, the change in attitudes towards black (African) South Africans in general from Time 1 to Time 2 (although non-significant) predicted more positive attitudes towards Indian South Africans in general at Time 2 (controlling for attitudes towards Indians at Time 1). This attitude generalisation contributes to the substantial body of literature that has identified attitude generalisation as the key mechanism underlying the STE (e.g., Tausch et al., 2010). Unfortunately, the present study lacked the necessary power to determine whether the contact condition (direct versus no contact) was significantly associated with the degree of change in attitudes towards black (African) South Africans over time. Indeed, the dummy variable of contact condition (direct vs control) was not significantly associated with the degree of change in attitudes towards the primary outgroup. Similarly, the contact condition dummy variable was also not significantly associated with the degree of change in trust towards black (African) South Africans from Time 1 to Time 2. However, what is most encouraging (and contrary to the non-significant results relating to the generalisation of trust reported by Openshaw (2015)), is the fact that the (significant) change in trust towards black (African) South Africans from Time 1 to Time 2 significantly predicted greater trust in Indian South

Africans at Time 2 (controlling for trust towards Indian South Africans at Time 1). A key strength of the STE observed in the present study relates to the inclusion of contact with and attitudes and trust towards Indian South Africans reported at Time 1 as control variables in the regression analyses. Including these controls eliminates important alternative explanations for the STEs that were observed (as per the research undertaken by Tausch et al., 2010). The inclusion of these control variables add confidence to the robustness of the attitude and trust generalisation observed in the present study.

Together, these findings offer strong support for the generalisation of both attitudes and trust among white South African female students across black (African) and Indian South African outgroups. The present findings suggest that intergroup contact can be especially beneficial in multicultural contexts where it may not be possible for individuals to experience direct contact with members of every outgroup, to the extent that positive intergroup encounters with members of one outgroup may lead to the generalisation of the positive attitudes and increased trust that might result from such encounters to other outgroups that may be rarely (or never) encountered.

The use of Indian South Africans as the secondary outgroup in the present study was decisive in allowing for a practical test of the STE within the Stellenbosch University context. Indian South Africans make up a very small minority of few than 300 students in a student body of more than 20,000 students. As such, it is very unlikely that the participants in the present study would have had regular opportunities for intergroup contact with Indian South Africans at Stellenbosch University. In contrast, black (African) South Africans comprise a significant minority group in the Stellenbosch University student body, and so it is likely that the participants in the present study would have far more opportunities to engage in intergroup contact with members of this outgroup. In its most practical form, the present findings suggest that positive attitudes and trust towards members of outgroup represented at Stellenbosch University are capable of generalising to include more positive attitudes and trust towards members of outgroups that are not (or are less) represented at Stellenbosch University.

As such, the present findings hold substantial value for informing policy at Stellenbosch University that encourage increased opportunities for positive intergroup contact (be it in the classroom, in the residences, or in student societies). Positive intergroup contact between students from different social groups is not only capable of promoting more positive attitudes towards the outgroup that is encountered (as per Allport's original contact hypothesis), but the benefits of such encounters may extend beyond the outgroup that has been encountered. In this

way, the broader generalisation of the benefits of contact experienced between groups on campus can be harnessed for promoting more positive intergroup attitudes and trust among South African groups more broadly.

Limitations of the Present Study

The present study makes an important contribution to the growing body of South African literature on the secondary transfer effect (STE) of intergroup contact. Using an experimental design to manipulate direct contact, the present study found evidence to support the STE via the generalisation of outgroup attitudes and outgroup trust. Nevertheless, despite its contribution to the literature, the present study does include a variety of limitations. These limitations can be summarised in terms of design, methodological, and statistical limitations.

In terms of design limitations, the experimental design of the present study poses a challenge to the broader generalisability of the results beyond the very specific, carefully controlled context within which the positive direct contact between the white South African participants and the black (African) South African confederate took place. The strength of any experimental design is that it makes it possible to carefully control the independent variable (in this case, positive direct contact) to test a causal relationship. This strength is described by the high internal validity associated with experimental designs. However, given their contrived, controlled nature, experiments lack the external validity associated with, for example, survey research. As such, it is difficult to know just to what extent the findings of the present study can be replicated in more naturalistic settings. This will require additional research using observational or survey methods (see for example Daiber, 2017, De Beer, 2015; Nell, 2017). Moreover, the generalisability of the results of the present study beyond the context in which the research was undertaken should also be undertaken with caution. The present study was undertaken in a single context (Stellenbosch University) among an opportunity sample drawn from a single population group (white female South African students), in relation to two specific target outgroups (black (African) and Indian South Africans). As such, it is unclear to what extent the pattern of result of the present findings can be generalised to other (university) contexts outside of Stellenbosch University and/or for individuals from other population groups and/or in relation to different target outgroups.

From a methodological viewpoint, the present study suffers limitations in terms of the outcome measures that were included as well as the variety of important outcome measures

that were not included. Experimental research can be resource intensive to run and so careful consideration should be given to the operationalisation of outcome measures and the number of outcome measures that are included. In the present study the key outcome measure of outgroup attitudes was measured with a single-item attitude thermometer. This single-item measure is arguably not as reliable as a multi-item measure of attitudes (Bergkvist & Rossiter, 2007). Moreover, while the STE was observed for attitude and trust generalisation, the limited number of constructs included in the surveys employed in the present study mean that it is not clear whether the STE that was observed is an artefact of the constructs that were included. In other words, would the STE also be observed in the South African context in terms of, for example, the generalisation of intergroup anxiety and/or empathic responding across target outgroups (see Lolliot et al., 2013). The lack of any behavioural measures in the present study is a further limitation of the present study. Self-report attitude measures (such as outgroup attitudes or outgroup trust) are less reliable than observable behavioural measures. However, it should be noted that the inclusion of behaviour measures substantially increases the resource and time demands associated with experimental research (often prohibitively so). Finally, from a methodological point of view, although robust evidence for the STE was observed in the present study, the results do not offer any understanding of the mechanisms that might explain *why* the STE occurred. In other words, the present study is limited by the exclusion of potential moderating variables (e.g., perceived similarity between the primary and secondary outgroups; Lolliot et al., 2013; Pettigrew 2009) that might elaborate on why the STE occurs.

The most important statistical limitation associated with the present study relates to its lack of power. Indeed, the lack of statistical power might also be regarded as a methodological limitation (in terms of too few participants in the experimental condition) that further limits the validity of the results. A key objective of the present study was to replicate the experimental design employed by Openshaw (2015) and to overcome the lack of power reported by Openshaw (2015) by ensuring a sufficiently large sample size. However, the time and resource demands of recruiting enough participants for the present study became prohibitive. This was the same challenge reported by Openshaw (2015). Nevertheless, despite this lack of power, it remains encouraging that the broad pattern of results in support of the STE in the present study supported those reported by Openshaw (2015).

The limitations associated with the present study described above should not be considered as factors that challenge the overall validity of the present findings. Below I

consider a variety of avenues for future research, many of which may in and of themselves address the limitations described above.

Directions for Future Research

There are several ways in which future research can build on the platform provided by the present study. Our understanding of the STE will be enhanced by the convergent validity that stems from research that adopts a variety of designs to investigate this phenomenon. The present experimental study produced results that largely corroborate those reported by the experiment undertaken by Openshaw (2015) and, together, the findings of these two experimental studies support the correlational results from survey research undertaken by Daiber (2017), De Beer (2015), and Nell (2017). Future research using a qualitative design might be employed to generate more detail regarding the generalisation of attitudes across South African outgroups, offering in-depth insights from individuals regarding their attitudes towards various South African outgroups.

Future research might also improve on the methodological (and statistical) shortcomings associated with the present study in a variety of ways. Firstly, it is important that future experimental research using the design of the present study can achieve the necessary power to enhance confidence in the results. Secondly, future research can advance the generalisability of the existing South African literature on the STE (including that of the present study) by undertaking research using participants or respondents from other social groups (specifically from minority-status groups) and using a variety of combinations of target secondary outgroups. Moreover, such research should go beyond studying the STE within university contexts to test the broader generalisability of the phenomenon among non-student samples. Thirdly, future research on the STE in the South African context must invest in using multi-item measures as a means of enhancing the reliability of the results. This may necessitate measuring fewer constructs overall (to accommodate resource and cost constraints). Fourthly, future research should go beyond attitude generalisation (which has been reliably established in the literature now) to test this phenomenon via the generalisation of emotions across outgroups (Lolliot et al., 2013), including intergroup anxiety (for evidence of the STE via anxiety generalisation see Daiber, 2017) and empathic responding (for evidence of the STE via empathy generalisation see De Beer, 2015).

Testing the STE via empathic responding is especially important given the pro-social nature of empathy and its importance for promoting positive intergroup relations. The empathic response can be both emotional (affective empathy) or cognitive (perspective-taking; Batson et al., 1997; Shamay-Tsoory, 2011). Empathic concern is an important force behind pro-social behaviour (Bartal, Decety, & Mason, 2011), producing a necessary motivational counterbalance to the self-centred wants to circumvent individual costs and preserve comparative benefit (Batson et al., 1997). Affective empathy and perspective-taking have been identified in the contact literature as significant mediators of the contact-prejudice relationship (for a meta-analysis see Pettigrew & Tropp, 2008). In other words, affective empathy and perspective-taking offer insights for understand *how* intergroup contact reduces prejudice; intergroup contact promotes greater affective empathy and greater perspective-taking, which in turn promotes lower prejudice and more positive outgroup attitudes. The importance of affective empathy as a mediator of contact effects has also been illustrated in the South African context, both cross-sectionally (e.g., Swart et al., 2010) and longitudinally (e.g., Swart et al., 2011a).

Lolliot et al. (2013) suggest that the STE via empathy generalisation may operate along one of two paths. In the first path, contact with the primary outgroup promotes greater empathy towards the primary outgroup that (as per the contact hypothesis) in turn promotes more positive attitudes towards the primary outgroup, which finally (as per the STE) generalises to more positive attitudes towards the secondary outgroup. In this model, empathy towards the primary outgroup serves as a precursor for attitude generalisation between the primary and secondary outgroups.

In the second path, contact with the primary outgroup again promotes greater empathy towards the primary outgroup that (as per the STE) promotes greater empathy towards the secondary outgroup, which (as per the contact hypothesis) finally promotes more positive attitudes towards the secondary outgroup. In this model it is the actual generalisation of empathy towards the primary outgroup to empathy towards the secondary outgroup that promotes more positive attitudes towards the secondary outgroup. This second model is arguably a stricter test of the STE via empathy generalisation than the first model described above.

Beyond investigation alternative pathways for the STE (e.g., via empathy generalisation) using direct contact (as used in the present study), future research should explore alternative types of intergroup contact that might promote the STE. Extended contact

(e.g., Wright et al, 1997) is an ideal dimension of contact to test in addition to that of direct contact. Extended contact refers to the vicarious experience of intergroup contact – for example, observing a fellow ingroup member engaging in intergroup contact or hearing a fellow ingroup member talking about their intergroup contact experiences. Extended contact may offer an important means of promoting positive outgroup attitudes in contexts where opportunities for direct intergroup contact are limited or in contexts where intergroup contact may be avoided because of intergroup anxiety. Extended contact was included in the broader experimental study that the present study formed part of and the results relating to the STE for those participants in the extended contact condition are reported by Berry (2020).

Whereas future research on empathy generalisation will offer a better understanding of the affective pathways through which the STE might occur, future research is also needed on the cognitive pathways along which the STE might operate (Pettigrew, 2009). One cognitive process that has enjoyed attention in the international literature on the STE (but has been neglected so far in the emerging South African literature) relates to the phenomenon of deprovincialisation. Deprovincialisation is the antithesis of provincialism – the latter relating to the egocentric negative evaluation of other cultures or groups of people. In other words, deprovincialisation describes the re-evaluation of one's ethnocentric worldview (Pettigrew, 2009) and is considered to be a cognitive outcome of regular intergroup encounters and efforts at integration (Sanatkar, Paolini, Damigella, & Licciardello, 2018). The deprovincialization hypothesis proposes that intergroup contact broadens the cultural horizons of majority-status group members by putting their taken-for-correct cultural standards into perspective. Through regular contact, people can obtain a less provincial view that serves to distance them from their ingroup and result in more openness toward ethnic outgroups (Pettigrew, 2009). As such, deprovincialization has also been associated with a greater perception of a common identity and reduced outgroup prejudice (Mepham & Martinovic, 2018). To date, no South African research has explored this cognitive process of generalised prejudice reduction via the process of developing a less provincial worldview.

Conclusion

The present research makes an important contribution to the growing body of South African contact literature investigating the STE. The experimental results reported in this thesis not only offer strong support for the STE, but they also support previous experimental (e.g.,

Openshaw, 2015) and correlational (e.g., Daiber, 2017; De Beer, 2015; Nell, 2017) findings from the South African context. As in the international literature, attitude generalisation was supported as a robust mechanism through which the STE occurred among the sample of white female South African participants included in the present study. Moreover, the present study also identified trust generalisation as an additional potential means for achieving the STE. Together, these findings offer a glimpse of the potential that interventions aimed at promoting positive intergroup contact have for achieving broader benefits beyond the social groups that individuals encounter in these interventions. This may be of relevance on South African university campuses, where young South Africans experience frequent opportunities to interact. Despite the various limitations that were identified in the present study, the results reported here offer substantial encouragement for the supporting role that positive intergroup contact might play in policies and interventions aimed at promoting more harmonious intergroup relations among South African university students.

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Appendix A

Overview of the Experimental Procedure

*During the study, **I focused on direct contact**, while George Berry focused on extended contact.*

Direct and Extended Contact Conditions

Step 1:

We met the participants outside the building. Where they were randomly selected to go with either me or with George.

"Good morning/afternoon. I would like to thank you for your participation. Firstly, you should know that we will not be studying your friendship during the time you spend here today. During the sessions we will be asking each of you to do different activities in separate rooms. Although we will not be present in these rooms, we will be overseeing the smooth running of the activities. we have randomly assigned each of you to a particular task, so you [George gestures towards a participant; extended contact condition] will complete task A, and you [I gesture towards the other participant; direct contact condition] will complete task B".

Step 2a:

I asked the participant in the extended contact condition to accompany me to the observation room (*room B)*. Here the participant was informed of their task using the following pre-determined script:

Me: *"*[Participant] *what I would like you to do is to observe* [direct contact participants' name] *having a discussion with the other participant,* [black confederate's name] *on the monitor in front of you. Their discussion will be based on questions found on three lists. Once they have finished with this task, wait for me and I will come and fetch you. Before we get started with the task, I would like for you to please fill out a few short questions found on the table in front of you. Once you have completed the questions, please place them back leave them on the table. Do you have any questions?"* If the participant in this condition did not have any further questions, I switched on the monitor in *room B* so that the participant in the extended contact condition could see and hear what the participant and black confederate were doing and saying in adjacent *room A.*

Step 2b:

George took both the participant in the direct contact condition and the black confederate to the room where they engaged in the Closeness Induction Task (*room A*). George introduced the participant to the confederate and explained the task they would be completing using the following pre-determined script:

"[Participant's name], *this is* [black confederate's name] *and* [black confederate's name] *this is* [participant's name]. *Thank you both for volunteering to participate in our research project. I would like for you to have a conversation about the items on these three lists* [George gestured to the lists placed in front of the confederate and participant]".

Step 3:

George: "*I will give you one minute to ask each other questions from the first list, three minutes to ask each other questions from the second list, and five minutes to ask each other questions from the third list. As I will be keeping time, I will come into the room to let you know when you should switch to the next list. So, for example if I was participating in this exercise, I would ask either of you "What is your name" and you would answer* [confederate] *or* [participant]. *Then you would ask me the same question and I would answer* [George]. *You will then move onto the next question. Either of you may ask the first question. Is everything clear?"*

If everything is clear George said, "*Right, before we start with the discussion, I would like for you to please fill out a few short questions found in the envelope on the table in front of you. Once you both have completed the questions, please place them back in the envelope and leave them on the table. I will now leave the room and give you a few minutes to complete the questions and to have a look at the questions on the first list. When you hear me knock on the door you may begin with the first list of questions. You have one minute to ask each other the questions on the first list. I will return after one minute and ask you to move onto the next list of questions, for which you will have three minutes. I will then return after three minutes and ask you to move onto the next list of questions, for which you will have five minutes."*

George entered room A, after one minute had elapsed and instructed the participant and black confederate to continue onto the second list of questions provided. They were informed that they had three minutes to ask each other questions from the second list. George once again entered room A, after three minutes had elapsed. At this time, George instructed the participant and the confederate to move onto the last list of questions. They had five minutes to ask each

other questions from the third and final list. George entered room A, after five minutes had elapsed and switched off the microphone. George then gave the following instruction to the participant and the confederate: "Alright, we have come to the end of this part of the exercise. I would now like for you both to complete a short questionnaire". I also asked the participant in the extended contact condition to complete the post-task questionnaire (Appendix D).

Step 4:

After the completion of the second online survey, both participants were debriefed. The participant in the direct contact condition was given additional information by me according to the following pre-developed script:

"[Participant's name], *your friend here was watching your discussion with* [black confederate's name] *on a television monitor. The reason why we did not tell you this is because we did not want your behaviour to be influenced by this in any way. If you are uncomfortable with the knowledge that your friend was watching your interaction, you have the option to remove yourself from the study. Would you like to remove yourself from the study? Do you have any other questions?"*

Participants were also asked to describe what they think the tasks were trying to explore. Once any questions had been answered, the participants were thanked and were informed that they would be sent a final online questionnaire (Appendix E) in one week's time. After the completion of this final online questionnaire (Appendix E) they each received a R20 Neelsie (SU Student Union) voucher.

Control Condition:

Step 1:

Participants in the control condition were welcomed to the session in the same manner as the participants in the experimental conditions.

Step 2:

Participants were led to room B where they completed the second survey (Appendix D) independently.

Step 3:

After the completion of the second survey (Appendix D) the participant was debriefed. Participants were informed that they would be sent a final online questionnaire (Appendix E), after which they each received a R20 Neelsie (SU Student Union) voucher.

APPENDIX B

Participant Recruitment Class Announcement

"Good morning/afternoon students. My name is Simone Strydom and I am a master's student in Research Psychology at Stellenbosch University. In order to obtain my degree, I am conducting a multi-phase research study, which includes questionnaires as well as an experiment. This research project has been reviewed by and received ethics clearance from Stellenbosch University's ethics committee.

This study explores the development of friendships amongst students and I would like for you and a close friend to participate. Your participation in this study will be anonymous and all the questionnaires you complete will be treated with confidentiality. You are under no obligation to participate in the study, as it is not a departmental requirement for your course. Therefore, you will not be penalised in any way, should you not wish to partake in the study.

If you are interested in getting more information on my study, please put your email address on a piece of paper and drop it into this box at the front as you leave the lecture hall. I will then contact you to set up a meeting. Thank you."

APPENDIX C

Participant Consent Form

STELLENBOSCH UNIVERSITY

CONSENT TO PARTICIPATE IN RESEARCH

Social Relations and Friendship Formation

You are asked to participate in a research study conducted by Ms. Simone Strydom (Master's Student, Stellenbosch University), under the supervision of Dr Hermann Swart (Department of Psychology). You were selected as a possible participant in this study because you are a student enrolled at Stellenbosch University, are over the age of 18, and have volunteered. Participation in this study requires that participants are sufficiently proficient in reading and writing in English, as well as being comfortable having a conversation in English. The results of the study will be used to publish in international journals as well as part of Ms. Strydom's thesis at Stellenbosch University.

1. PURPOSE OF THE STUDY

This study examines the processes involved in the early stages of friendship formation and how these relate to social relationships in general.

2. PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following things:

1. Fill out an online questionnaire that should not take more than 45 minutes of your time.

2. Come to the Psychology Department at a time of your convenience for a 20-minute exercise where we will explore the processes of friendship formation.

3. Fill out an additional two online questionnaires, one directly after the exercise at the psychology department and a final questionnaire approximately one week after the exercise.

3. POTENTIAL RISKS AND DISCOMFORTS

We do not anticipate any risks to you for participating in this research, as similar research has been conducted in the past without adverse reactions. Participants in related studies have found the experience rewarding, but in the unlikely event that your participation leaves you feeling

unhappy, throughout the study, we will provide you with pamphlets and contact details for the *Centre for Counselling and Student Development*. Their contact details appear below:

Centre for Counselling and Student Development Contact Details:

Address: 37 Victoria Street, Stellenbosch

Tel: +27 (0)21 808 4707/1626

Tel: 082 557 0880 (for 24 hours emergencies)

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

Understanding the mechanisms behind friendship formation (and the possible benefits that result) will allow institutions such as Stellenbosch University to develop programmes that promote a friendlier campus climate. The research may also have wider applicability on the international stage as we hope to publish the results in peer-review journals as well as present our findings at (inter)national conferences.

5. PAYMENT FOR PARTICIPATION

You will receive a R20 Neelsie (SU Student Union) voucher per participant. To qualify for into this voucher, you will need to participate in each of the 3 phases of this study (described above).

6. CONFIDENTIALITY

No other student or staff at Stellenbosch University will have access to the data you provide during this study. The data will be kept in password protected format on the personal, or office computers belonging to the researcher.

Only anonymised, averaged data will be used in any analyses and results will be used for the write-up of a Magister thesis (Simone Strydom), several manuscripts for submission to international peer-reviewed academic journals, and presentations at (inter)national conferences. After the study has been completed and the data fully analysed, the data files will be electronically archived. In accordance with American Psychological Association guidelines, the data will be securely archived for up to 5 years after publication and then destroyed.

7. PARTICIPATION AND WITHDRAWAL

You can choose to participate in this study or not. If you volunteer to be in this study, you may withdraw at *any time* without any consequences. You may withdraw from the study during any of the online surveys (simply by closing the web-browser) or during the exercise (by informing the researcher of your desire to withdraw your participation). You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject contact Ms Maléne Fouché (mfouche@sun.ac.za; 021 808 4622) at the Division for Research Development. The researchers may withdraw you from this study should any circumstances arise which warrant doing so.

8. IDENTIFICATION OF INVESTIGATOR

If you have any questions or concerns about the research, please feel free to contact either the researcher or her supervisor at the contact details provided below.

Ms. Simone Strydom: Researcher

Position: Magister Candidate, Department of Psychology, Stellenbosch University

E-mail: 22088679@sun.ac.za

Tel: +27 (0)833972584

Dr. Hermann Swart: Supervisor

Position: Lecturer, Department of Psychology, Stellenbosch University

E-mail: hswart@sun.ac.za

Tel: (021) 808 9061

APPENDIX D

Online Questionnaire Presented at Time 1 (1-week Pre-task)

Please Note: The use of the word "outgroup" in the following document is used to denote which group is specified to the participant, and for this questionnaire "outgroup" was replaced with black South African / Indian South African. Also note that the headings for each of the constructs were not displayed in the final survey presented to the participants.

Demographics

1. **How old are you**?

2. **What is your home language**? (*English / Afrikaans / IsiXhosa / IsiZulu / Other)*

3. **What is your nationality**? (*South African / Other (please specify)*)

4. **Which broad population group do you identify yourself with**? (*White South African / black South African / Indian South African / Other (please specify)*)

The Department of Psychology does not acknowledge or endorse the legitimacy of these artificial categories and accepts that individuals might categorise themselves in several different ways over-and-above, or other than just, ethnicity. This survey, however, aims to compare the points of view and experiences of individuals across these ethnic groups on campus, and it is therefore important that an individual's responses can be located within a given ethnic group. This does not mean that the individual identifies with or endorses the category; rather that it provides a context for understanding his/her point of view or experience.

5. **What year of university are you in**? (*1st year / 2nd year / 3rd year / 4th year / Other*)

6. **What form of accommodation do you live in? Select one:**

(Private Accommodation, University Accommodation)

7. *To match up your three questionnaires, we will need a unique code for each participant. This code is made up in such a way that there is no way, in which the researchers will be able to trace it back to you.*

The first part of your code: Please enter the LAST four digits of your student number in the first box.

Last four digits of your student number

The second part of your code: Please enter your day of birth (dd) into the box below.

Day of birth (dd)

Cross-group friendships with black South Africans (adapted from Swart et al., 2011a)

1. About how many of your friends at Stellenbosch University are black South Africans?

(*0 = None, 1 = Very few, 2 = Some, 3 = About half, 4 = Quite a few, 5 = A lot, 6 = All*)

2. How often do you spend time with your black South African friend(s) at your home/flat/res.?

(*0 = Never, 1 = Less than once a month, 2 = Once a month, 3 =2-3 times a month, 4 = Once a week, 5 = 2-3 times a week, 6 = Daily, 9 = I do not have any black (African) South African friends at Stellenbosch University)*

3. How often do you spend time with your black South African friend(s) at their home/flat/res.?

(*0 = Never, 1 = Less than once a month, 2 = Once a month, 3 =2-3 times a month, 4 = Once a week, 5 = 2-3 times a week, 6 = Daily, 9 = I do not have any black (African) South African friends at Stellenbosch University* 102

4. How often do you spend time with your black South African friend(s) at social activities?

(*0 = Never, 1 = Less than once a month, 2 = Once a month, 3 =2-3 times a month, 4 = Once a week, 5 = 2-3 times a week, 6 = Daily, 9 = I do not have any black (African) South African friends at Stellenbosch University)*

Please answer the following set of questions thinking about your close white South African friend(s).

1. How many of them have black South African friend(s)?

(*0 = None, 1 = Very few, 2 = Some, 3 = About half, 4 = Quite a few, 5 = A lot, 6 = All*)

2. How many your family members (including parents, brothers, sisters, cousins, and so forth) have friends who are black South Africans?

(0 = None, 1 = Very few, 2 = Some, 3 = About half, 4 = Quite a few, 5 = A lot, 6 = All)

Intergroup Anxiety (adapted from Stephan & Stephan, 1985; Swart et al., 2011a)

Please imagine that you are the only white South African in a group of black South Africans. With this scenario in mind, please answer the following questions as honestly as possible.

To what extent do you think you would you feel...

1. ...anxious?

(1 = Not at all, 2 = Slightly, 3 = A little, 4 = Somewhat, 5 = Quite a bit, 6 = Considerably, 7 = Extremely)

2. ...comfortable?

(1 = Not at all, 2 = Slightly, 3 = A little, 4 = Somewhat, 5 = Quite a bit, 6 = Considerably, 7 = Extremely) 103

3. ...awkward?

(1 = Not at all, 2 = Slightly, 3 = A little, 4 = Somewhat, 5 = Quite a bit, 6 = Considerably, 7 = Extremely)

Outgroup Attitudes (Feeling Thermometer) towards black South Africans (adapted from Converse & Presser, 1986)

We would like to ask you to rate how you feel towards black South Africans in general. Don't focus on specific individuals. The Thermometer below runs from zero (0) to a hundred (100) degrees. The higher the number, the warmer or more favourable you feel towards them. The lower the number, the colder or less favourable you feel.

Please indicate how warm or cold you feel towards black South Africans in general. If you feel neither warm nor cold, rate them at 50.

cold<<<<<<<<<<<<<<<<<<<<<<<<<neutral>>>>>>>>>>>>>>>>>>>>>>>>>warm										
0	10	20	30	40	50	60	70	80	90	100

Outgroup Trust towards black South Africans (developed for this study)

Please read the following and indicate best how much you disagree / agree with each statement.

1. I cannot trust black South Africans.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree) 104

2. I can rely on black South Africans to look out for my best interest as a white South African.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree)

3. I am often suspicious when I am in the company of black South Africans.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree)

Cross-group friendships with Indian South Africans (adapted from Swart et al., 2011a)

Please tell us about your contact and friendships with Indian South African students studying at Stellenbosch University.

1. Overall, how frequently do you have direct, face-to-face contact (e.g., a conversation) with Indian South African students?

(*0 = None, 1 = Less than once a month, 2 = Once a month, 3 =2-3 times a month, 4 = Once a week, 5 = 2-3 times a week, 6 = Daily)*

2. How pleasant/unpleasant would you rate your direct, face-to-face interactions with Indian South African students?

(1 = Very unpleasant, 2 = Somewhat unpleasant, 3 = Neither pleasant nor unpleasant, 4 = Somewhat unpleasant, 5 = Very unpleasant)

3. How positive/negative would you rate your direct, face-to-face interactions with Indian South African students?

(1 = Very negative, 2 = Somewhat negative, 3 = Neither positive nor negative, 4 = Somewhat positive, 5 = Very positive) 105

Please answer the following set of questions thinking about your close white South African friend(s).

1. How many of them have Indian South African friend(s)?

(*1 = None, 2 = Very few, 3 = Some, 4 = About half, 5 = Quite a few, 6 = A lot,* 7 = *All*)

2. How many your family members (including parents, brothers, sisters, cousins, and so forth) have friends who are Indian South Africans?

(1 = None, 2 = Very few, 3 = Some, 4 = About half, 5 = Quite a few, 6 = A lot, 7 = All)

Outgroup Attitudes (Feeling Thermometer) towards Indian South Africans (adapted from Converse & Presser, 1986)

We would like to ask you to rate how you feel towards Indian South Africans in general. Don't focus on specific individuals. The Thermometer below runs from zero (0) to a hundred (100) degrees. The higher the number, the warmer or more favourable you feel towards them. The lower the number, the colder or less favourable you feel.

Please indicate how warm or cold you feel towards Indian South Africans in general. If you feel neither warm nor cold, rate them at 50.

cold<<<<<<<<<<<<<<<<<<<<<<<<<neutral>>>>>>>>>>>>>>>>>>>>>>>>>warm										
0	10	20	30	40	50	60	70	80	90	100

Outgroup Trust towards Indian South Africans (developed for this study)

Please read the following and indicate best how much you disagree / agree with each statement.

1. I cannot trust Indian South Africans.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree)

2. I can rely on Indian South Africans to look out for my best interest as a white South African.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree)

3. I am often suspicious when I am in the company of Indian South Africans.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree)

APPENDIX E

Pre- and Post-task State Anxiety Questionnaire

Pre-discussion question:

Contact Condition: Now, before you two start the discussion, to what extent are you feeling...

	not at all	a little	unsure	quite a bit	extremely
...anxious?	1	2	3	4	5
...comfortable?	1	2	3	4	5
...awkward?	1	2	3	4	5

Post-discussion question:

Contact Condition: Towards the end of the discussion, to what extent did you feel...

	not at all	a little	unsure	quite a bit	extremely
...anxious?	1	2	3	4	5
...comfortable?	1	2	3	4	5
...awkward?	1	2	3	4	5

APPENDIX F

Closeness Induction Task

List I (one minute)

1. What is your name?

2. How old are you?

3. Where are you from?

4. What year are you at the University of Stellenbosch?

5. What do you think you might major in? Why?

6. What made you come to the University of Stellenbosch?

7. What is your favourite class at the University of Stellenbosch? Why?

List II (three minutes)

1. What do you enjoy doing in your spare time?

2. What would you like to do after graduating from the University of Stellenbosch?

3. What would be the perfect lifestyle for you?

4. What is something you have always wanted to do but probably never will be able to do?

5. If you could travel anywhere in the world, where would you go and why?

6. What is one strange thing that has happened to you since you've been at the University of Stellenbosch?

7. What is one embarrassing thing that has happened to you since arriving at University of Stellenbosch?

8. What is one thing happening in your life that makes you stressed out?

9. If you could change anything that happened to you in high school, what would that be?

10. If you could change one thing about yourself, what would that be?

11. Do you miss your family?

12. What is one habit you'd like to break?

List III (five minutes)

1. If you could have one wish granted, what would that be?

2. Is it difficult or easy for you to meet people? Why?

3. Describe the last time you felt lonely.

4. What is one emotional experience you've had with a good friend?

5. What is one of your biggest fears?

6. What is your most frightening early memory?

7. What is your happiest early childhood memory?

8. What is one thing about yourself that most people would consider surprising?

9. What is one recent accomplishment that you are proud of?

10. Tell me one thing about yourself that most people who already know you don't know.

APPENDIX G

Online Questionnaire Presented at Time 2 (Post-task)

Please Note: The use of the word "outgroup" in the following document is used to denote which group is specified to the participant and for this questionnaire "outgroup" was replaced with black South African / Indian South African. Also note that the headings for each of the constructs were not displayed in the final survey presented to the participants.

Demographics

1. **Which broad population group do you identify yourself with**? (*White South African / black South African / South African Indian / Other (please specify)*)

The Department of Psychology does not acknowledge or endorse the legitimacy of these artificial categories and accepts that individuals might categorise themselves in a few different ways over-and-above, or other than just, ethnicity. This survey, however, aims to compare the points of view and experiences of individuals across these ethnic groups on campus, and it is therefore important that an individual's responses can be located within a given ethnic group. This does not mean that the individual identifies with or endorses the category; rather that it provides a context for understanding his/her point of view or experience.

2. To match up your three questionnaires, we will need a unique code for each participant. This code is made up in such a way that there is no way, in which the researchers will be able to trace it back to you.

The first part of your code: Please enter the LAST four digits of your student number in the first box.

Last four digits of your student number

The second part of your code: Please enter your day of birth (dd) into the box below.

Day of birth (dd)

Intergroup Anxiety (adapted from Stephan & Stephan, 1985; Swart et al., 2011a)

Please imagine that you are the only white South African in a group of black South Africans. With this scenario in mind, please answer the following questions as honestly as possible.

To what extent do you think you would you feel...

1. ...anxious?

(1 = Not at all, 2 = Slightly, 3 = A little, 4 = Somewhat, 5 = Quite a bit, 6 = Considerably, 7 = Extremely)

2. ...comfortable?

(1 = Not at all, 2 = Slightly, 3 = A little, 4 = Somewhat, 5 = Quite a bit, 6 = Considerably, 7 = Extremely)

3. ...awkward?

(1 = Not at all, 2 = Slightly, 3 = A little, 4 = Somewhat, 5 = Quite a bit, 6 = Considerably, 7 = Extremely)

Outgroup Attitudes (Feeling Thermometer) towards black South Africans (adapted from Converse & Presser, 1986)

We would like to ask you to rate how you feel towards black South Africans in general. Don't focus on specific individuals. The Thermometer below runs from zero (0) to a hundred (100) degrees. The higher the number, the warmer or more favourable you feel towards them. The lower the number, the colder or less favourable you feel.

Please indicate how warm or cold you feel towards black (African) South Africans in general. If you feel neither warm nor cold, rate them at 50.

cold<<<<<<<<<<<<<<<<<<<<<<<<<neutral>>>>>>>>>>>>>>>>>>>>>>>>>warm										
0	10	20	30	40	50	60	70	80	90	100

Outgroup Trust towards black (African) South Africans (from Openshaw, 2015)

Please read the following and indicate best how much you disagree / agree with each statement.

1. I cannot trust black (African) South Africans.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree)

2. I can rely on black (African) South Africans to look out for my best interest as a white South African.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree) 113

3. I am often suspicious when I am in the company of black (African) South Africans.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree)

Outgroup Attitudes (Feeling Thermometer) towards Indian South Africans (adapted from Converse & Presser, 1986)

We would like to ask you to rate how you feel towards Indian South Africans in general. Don't focus on specific individuals. The Thermometer below runs from zero (0) to a hundred (100) degrees. The higher the number, the warmer or more favourable you feel towards them. The lower the number, the colder or less favourable you feel.

Please indicate how warm or cold you feel towards Indian South Africans in general. If you feel neither warm nor cold, rate them at 50

cold<<<<<<<<<<<<<<<<<<<<<<<<<neutral>>>>>>>>>>>>>>>>>>>>>>>>>warm										
0	10	20	30	40	50	60	70	80	90	100

Outgroup Trust towards Indian South Africans (from Openshaw, 2015)

Please read the following and indicate best how much you disagree / agree with each statement.

1. I cannot trust Indian South Africans.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree)

2. I can rely on Indian South Africans to look out for my best interest as a white South African.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree)

3. I am often suspicious when I am in the company of Indian South Africans.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree)

Success of the Task (from Openshaw, 2015)

Contact Condition

We would now like you to think about the interaction and the person with whom you interacted with.

1. Do you think the conversation you had in the task was a good way to get to know somebody?

(*1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree*)

Disclosure (from Openshaw, 2015)

Contact Condition

1. When you think about the conversation you just had as a whole (what you shared and what the other participant shared), to what extent do you think the conversation you just had was of a personal/private nature?

(*1 = Not at all personal/private, 2 = Hardly personal/private, 3 = Somewhat personal/private, 4 = Quite personal/private, 5 = Extremely personal/private*) 115

Category Salience (adapted from Brown & Hewstone, 2005)

Contact Condition

Please think about the conversation you have just had with the black (African) South African participant. Please answer the following questions:

1. To what extent did you feel as if you were acting/behaving as a typical member of the white South African community during the conversation?

(1 = Not at all, 2 = A little, 3 = Quite a bit, 4- A lot, 5 = Completely)

2. To what extent do you think the black (African) South African participant you had the conversation with is a typical representative/example of the black (African) South African community?

(*1 = Not at all, 2 = A little, 3 = Quite a bit, 4- A lot, 5 = Completely*)

3. During the conversation, to what extent were you aware that you were a white South African interacting with a black (African) South African?

(*1 = Not at all, 2 = A little, 3 = Quite a bit, 4- A lot, 5 = Completely*)

Outgroup Attitudes (Feeling Thermometer) towards the black (African) South African Confederate (adapted from Converse & Presser, 1986)

Contact Condition

Using the same Thermometer as before, how warm or cold did you feel towards the black (African) South African you just had the conversation with?

cold<<<<<<<<<<<<<<<<<<<<<<<<<neutral>>>>>>>>>>>>>>>>>>>>>>>>>warm										
0	**10**	**20**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**

APPENDIX H

Online Questionnaire Presented at Time 3 (1-week Post-task)

Please Note: The use of the word "outgroup" in the following document is used to denote which group is specified to the participant and for this questionnaire "outgroup" was replaced with black South African / Indian South African. Also note that the headings for each of the constructs were not be displayed in the final survey presented to the participants.

Demographics

1. **Which broad population group do you identify yourself with**? (*White South African / black (African) South African / South African Indian / Other (please specify)*)

The Department of Psychology does not acknowledge or endorse the legitimacy of these artificial categories and accepts that individuals might categorise themselves in several different ways over-and-above, or other than just, ethnicity. This survey, however, aims to compare the points of view and experiences of individuals across these ethnic groups on campus, and it is therefore important that an individual's responses can be located within a given ethnic group. This does not mean that the individual identifies with or endorses the category; rather that it provides a context for understanding his/her point of view or experience.

2. To match up your three questionnaires, we will need a unique code for each participant. This code is made up in such a way that there is no way, in which the researchers will be able to trace it back to you.

The first part of your code: Please enter the LAST four digits of your student number in the first box.

Last four digits of your student number

The second part of your code: Please enter your day of birth (dd) into the box below.

Day of birth (dd)

Outgroup Attitudes (Feeling Thermometer) towards black South Africans (adapted from Converse & Presser, 1986)

We would like to ask you to rate how you feel towards black South Africans in general. Don't focus on specific individuals. The Thermometer below runs from zero (0) to a hundred (100) degrees. The higher the number, the warmer or more favourable you feel towards them. The lower the number, the colder or less favourable you feel.

Please indicate how warm or cold you feel towards black (African) South Africans in general. If you feel neither warm nor cold, rate them at 50.

cold<<<<<<<<<<<<<<<<<<<<<<<<<neutral>>>>>>>>>>>>>>>>>>>>>>>>>warm										
0	10	20	30	40	50	60	70	80	90	100

Outgroup Trust towards black (African) South Africans (developed for this study)

Please read the following and indicate best how much you disagree / agree with each statement.

1. I cannot trust black (African) South Africans.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree)

2. I can rely on black (African) South Africans to look out for my best interest as a white South African.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree)

3. I am often suspicious when I am in the company of black (African) South Africans.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree)

Outgroup Attitudes (Feeling Thermometer) towards Indian South Africans (adapted from Converse & Presser, 1986)

We would like to ask you to rate how you feel towards Indian South Africans in general. Don't focus on specific individuals. The Thermometer below runs from zero (0) to a hundred (100) degrees. The higher the number, the warmer or more favourable you feel towards them. The lower the number, the colder or less favourable you feel.

Please indicate how warm or cold you feel towards Indian South Africans in general. If you feel neither warm nor cold, rate them at 50.

cold<<<<<<<<<<<<<<<<<<<<<<<<<neutral>>>>>>>>>>>>>>>>>>>>>>>>>warm										
0	**10**	**20**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**

Outgroup Trust (Indian South Africans)

Please read the following and indicate best how much you disagree / agree with each statement.

1. I cannot trust Indian South Africans.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree)

2. I can rely on Indian South Africans to look out for my best interest as a white South African.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree)

3. I am often suspicious when I am in the company of Indian South Africans.

(1 = Completely disagree, 2 = Somewhat disagree, 3 = Neither agree nor disagree, 4 = Somewhat agree, 5 = Completely agree)